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# ALBANY MEDICAL ANNALS

Journal of the Alumni Association of the  
Albany Medical College

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VOLUME XXIV

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Ἀσφαλὲς καὶ ἔμπεδον ἔστω τὸ σὸν ἔδος. Ἐκ σκότου μὲν ἔξαγε  
φάος, ἐκ δὲ πάθους ἀναψυχὴν



ALBANY, N. Y.  
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# ALBANY MEDICAL ANNALS

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## Original Communications

### PRESIDENTIAL ADDRESS

*Delivered to the Albany Medical College Alumni Association  
of Central New York, at the Annual Meeting held  
in Syracuse, September 24, 1902*

By W. CLINTON KELLOGG, M. D.,  
Syracuse, N. Y.

#### *Fellow Alumni:*

One year ago it was my good fortune to be honored by an election to the highest office in the gift of this association, a distinction of which I am proud, and as I look into the faces of those before me it awakens a feeling of brotherly love, for we are all descendants from the same Alma Mater, we are each pursuing the same noble work.

In selecting a theme for my address to-night it seems at this time altogether fitting that I should present something of the early history of the Albany Medical College, and especially that pertaining to its foundation. The history of the Albany Medical College is so closely connected with the history of the people of Albany, and with the individuals who worked so assiduously for its foundation and success, that a review of the earliest records of the practice of medicine in the colony are of interest.

Early in its history, the people of Fort Orange—or Albany—received the benefit of medical advice and attendance, and it is interesting to note that the Dutch West India Company, in order to further its own interests by having healthy settlers in its employ, issued this order:

“The patroons and colonists shall in particular, and in the speediest manner, endeavor to find ways and means whereby



they may support a minister and a schoolmaster, that the service of God and the zeal for religion may not grow cold and be neglected among them, and that they do for the first, procure a comforter for the sick."

"These first, comforters of the sick," often combined the offices of physician, preacher and frequently a civil position of some kind. History also shows that all early physicians were educated abroad and the French wars, the revolution and the war of 1812, brought into the country physicians highly educated for that age, who elevated the standing of the profession in the community. Surgery was made prominent by the necessities of the times, and Albany, situated at the head of that most coveted vantage ground—the Hudson valley—surrounded by the sharply contested Champlain region, Benningham, the Mohawk valley and the Iroquois country stretching westward, became a centre of activity and received her quota of prominent surgeons as permanent citizens after peace was declared. A hospital was established in Albany during the French wars, to care for the wounded from the battlefield of Ticonderoga. It was in a barn belonging to Madame Schuyler, and later a permanent structure took its place.

The history of the early work in the practice of medicine in the Dutch colony shows that the situation of Albany, rendering it an attractive and convenient place for settlement, the centering there of military and civic interests, the not infrequent visitations of epidemics of small-pox, yellow fever and more especially cholera, all tended to keep before the minds of the people the great necessity of men trained to treat disease with success. So when the field was ready the formation of a medical college at this point, with the encouragement and assistance of the citizens of Albany, became a possibility.

In 1821, Dr. Alden March opened a school for the study of anatomy in Albany. His lectures were delivered in a small wooden building at Montgomery street, above Columbia. At this time there were about 15,000 people in Albany. Dr. March illustrated his lectures and on account of the popular prejudice he was obliged to bring all material for dissection from Boston. The trouble and expense were great, and often for safety he had to make the journey in his private

carriage. In 1825, Dr. March was offered a position in the Vermont Medical College, at Castleton, which he accepted and held for ten years, residing during the time at Albany, where he practiced and carried on his school. Dr. James H. Armsby was a pupil and an assistant demonstrator of Dr. March's and succeeded him in his position at the Vermont Medical College. Later, in 1835, these gentlemen carried on the school at Albany under the name of "Practical School of Anatomy and Surgery."

Dr. March first agitated the question of forming a medical college and hospital at Albany in 1830, by delivering a public lecture. This lecture was printed and created much comment, but the object was bitterly opposed by those connected with other institutions of a similar character throughout the country. Dr. March's reputation as a surgeon became eminent and attracted students from all parts of the country. He found in Dr. Armsby a man who not only helped him in his school, but a man who had the power to influence the public, the brain to plan and the energy to execute. Mainly through his influence and by his efforts, on the 14th of April, 1838, a meeting of citizens was called to consider the formation of an organization to be called The Albany Medical College. As a result, this resolution was passed:

Resolved, "That this meeting deem it expedient to establish a medical college in this city and endeavor hereafter to obtain an act of incorporation from the legislature."

The feeling aroused by this meeting was so strong that many energetic friends were enlisted in the enterprise. The Common Council immediately granted the use of a vacant school building free for five years, and in May, a second meeting was held, at which articles of association were adopted, and a board of trustees of twenty-two members was appointed. In the same month the board named the following as the first faculty of the Albany Medical College: Alden March, professor of surgery; James H. Armsby, anatomy and physiology; Amos Dean, medical jurisprudence; Ebenezer Emmons, chemistry and pharmacy; Henry Greene, obstetrics; David M. McLachlan, materia medica; David M. Reese, theory and practice of medicine.

Dr. Armsby gave up his work in Vermont in 1838 and devoted all his time for three years to the establishment of

the college. He delivered many courses of lectures to the public—illustrated by the dissection of human subjects—in Albany, Troy and other places. They were well attended and did much to remove the prejudice against dissection, arouse public interest and raise funds for the enterprise. Indeed, the course delivered in 1837 was attended by about three hundred people, many of whom were influential, and it was a direct cause of the success of the meeting of 1838.

The first course of lectures of the college commenced on January 3d, 1839. There were fifty-seven students. The first annual commencement was held April 24, 1839, and thirteen graduated. At first the college held no charter and had no power to confer degrees. It was bitterly opposed by other medical institutions, and by most of the physicians of Albany, but the citizens of Albany sustained it.

Dr. March introduced his new and highly practical plan of holding surgical clinics in the college early in the history of the institution and presented to the class a large number of cases requiring surgical operations and treatment. This was a new feature in medical education, afterwards adopted by institutions throughout the country. Many thousand important cases were thus treated, the poor free of charge.

The evening lectures to the public given by Dr. Armsby, and Mr. Dean, did much to awaken public interest and bring funds to the college. They were attended by the citizens, strangers at the Capital and members of the legislature. Their influence was broad and far reaching and did much to help secure a charter for the college and secure appropriations from the legislature. After the charter was obtained curators for the annual examinations of candidates for the degree of M. D. were appointed, the first being Peter Wendell, Platt Williams, Barent P. Staats, Thomas C. Brinsmade, of Troy, and Samuel White, of Hudson.

In May, 1841, the legislature gave \$5,000 a year for three years to the college. This money was secured mainly by the personal efforts of Dr. Armsby and was spent for the library, chemical apparatus and collections for the museum. The museum, which is one of the features of the college, had for its nucleus the valuable collections, both anatomical and pathological, of Drs. March, Armsby and McNaughton. These collections are most valuable, being the results of the



experience and work of many years, and of repeated visits to Europe. Dr. March's collection is especially large and varied, being the product of over fifty years of surgical practice; prepared and preserved at his own expense, for the benefit of the college. Dr. McNaughton's collection was made during twenty years of teaching in a college of physicians and surgeons of western New York. Dr. Armsby resided in the college for the first three years and gave much time to the arrangement of the specimens. The museum was then open to the public and for several months was crowded with curious and interested people. It has been kept open ever since and has done much to dispel the feeling against dissection. It is said to be the best museum in this country and excelled by few in Europe. Dr. Armsby was named curator of the museum in 1841. He also added to his other duties that of the first registrar of the college.

The Albany Medical College has always advocated a high standard of medical education and few schools have been so energetic in every movement to perfect the laws governing the study of medicine. The college was one of the first to establish a three years graded course with an entrance examination. Its faculty has always ranked high, many of the instructors having studied in Europe. Interest in surgery seems to have been unusually active among the students, even at that early date, for during the rebellion two hundred and forty-three graduates of the Albany Medical College and five of the faculty were in the United States service as volunteer surgeons or commissioned officers.

Dr. Alden March was prominent in effecting the foundation of the Albany Hospital and his influence was ably sustained by Dr. Armsby, who made unceasing efforts to bring about its success. It was opened on November 1, 1851, and by the individual efforts of Dr. Armsby alone, from 1849 to 1873, over \$100,000 was secured for enlarging and improving the hospital.

The Law School and Observatory owe their existence to the same men who founded the college. Amos Dean, for twenty years professor of medical jurisprudence in the college, has been the principal manager of the Law School. The idea of those interested in education was to establish a university at Albany to embrace the Albany Medical College, the Law

School and several other departments of special science, but this object was never attained. Since 1873 the Albany Medical College, the College of Pharmacy, Albany Law School and the Dudley Observatory, all located at Albany and Union College and the School of Engineering at Schenectady, have been affiliated and now form the Union University.

The Alumni Association of the Albany Medical College was organized January 20, 1874, and incorporated February 6 of the same year. Its object is to promote the interests of medical education and cultivate social intercourse among the graduates, the total number of whom to the present year, is 2,416.

How true are the words of Munsell, who says in his collections: "The history of the Albany Medical College illustrates the force of individual efforts when encouraged and fostered by an enlightened and liberal community."

In preparing this paper I have referred to magazine articles, "Munsell's Collections" on the history of Albany, and "The Landmarks of Albany County."

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## INFLUENCE OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK ON MEDICAL LEGISLA- TION AND THE STANDARD OF MEDICINE.

*Read at the Meeting of the Medical Society of the County of Kings,  
October 21, 1902.*

By ALBERT VANDER VEER, M. D.,

Professor of Surgery, Albany Medical College.

*Mr. President and Gentlemen of the Society:*

By your kind invitation I am present this evening to enjoy your hospitality, and to say something regarding the Medical Society of the State of New York.

Some few years since, while attending a dinner at Copenhagen, one of the surgeons present from that section of the country, alluding to my residence, said that "he considered one of his greatest honors in life to have been his election as an honorary member of this society." A similar expression was once made to me by a leading surgeon in London.

My time of life will permit me to make the following statement: That in my years of active, professional, society

work, I have met many members throughout our own country who have frequently made this same remark, and who have often alluded to the standing of this society, in its organization, in its work, in the good that it had conferred upon the profession-at-large, as a model after which to pattern.

■ When thinking over these pleasant reminiscences I ask myself what has our society done that such earnest remarks are made regarding its standing? What about its organization? what about the work it has formulated as a society? what effect has it had upon medical legislation? and in reference to the laws now in force in this State? In what way has it advanced medicine to a higher plane? or in what manner are we indebted to this society for the good that is recognized in it by so many representative men?

The organization of the Medical Society of the State of New York was the outgrowth of the honest efforts and good work of some of the best and ablest of our early practitioners in this State. We find a record of their organizing as early as 1794, and from this time on their meetings were conducted in a continuous manner, gathering in one way or another, there finally being a consummation of their efforts in the act to incorporate medical societies for the purpose of regulating the practice of physic and surgery in this State, which was passed by the legislature in the winter of 1806. One of the early laws of 1791 was an act to establish the College of Physicians and Surgeons, to be under the jurisdiction of the Regents of the University of the State of New York. Another important law was that of 1797—an act to regulate the practice of physic and surgery; but from 1806, dates our authentic organization. From that time on it is interesting to note the different laws passed, emanating as suggestions from the society to the legislature, or in amending one section or another of the then existing laws; at one time giving the Regents of the University the power to grant the degree of medicine; at another time leaving it entirely with the Censors of the County Societies; at another time appointing a State Board of Medical Examiners, of which Dr. Jacobi was president, and entirely under the control of the Regents of the University to grant diplomas to such applicants as might come before them. It is worthy of comment that this board did not, at any time, pass a single candidate. Then

it is interesting to note the laws that were passed as far back as 1827—"general regulations concerning the practice of medicine"—requiring every physician to join his County Medical Society; providing for the discipline of their members; prescribing the term of study for medical students; prohibiting the practice of medicine without a license or diploma from the incorporated medical society, or from the Board of Regents, or the legal authority of another State; prohibiting those coming from out of the State from practicing medicine until they had satisfied the County Medical Society as to their having studied medicine the prescribed time; requiring registering with the County Clerk; that a diploma granted by a medical college in the State shall not be a license, and as a penalty cannot collect fees for practice and made guilty of a misdemeanor.

It is interesting to note the influence the society has had upon the organization of medical colleges in the State; also such laws as permitted the use of the bodies of convicts and unclaimed bodies in alms houses to be delivered to medical colleges for dissection.

There was a continuous chapter of amendments from 1821 down. Action was taken as early as 1831 to urge upon the State an act to incorporate the College of Pharmacy in the City of New York. In 1832 an act for the preservation of the public health; in 1834 urging further relief for the Eye Infirmary of the City of New York; a continuous running fire of amendments from 1832, to the various laws for the preservation of the public health. There seems to have been quite a good deal of discussion, at that time, as to the examination of medical students, and in 1836 an important law was passed: "An act amending revised statutes of 1827, in relation to admission of students to examination by medical societies; prohibits a medical student from being examined except by the County Society where he has pursued his studies, or by the State Society, and those coming from out the State, except by the State Society." It would seem to convey the impression that there was a necessity for looking out for "tricks in the trade" even at that time. From about 1839, perhaps earlier, and following, many recommendations were made to the legislature in regard to quarantine laws. In 1842 suggestions were made and an act passed to establish



State Lunatic Asylums, and to "provide for the care, maintenance and recovery of the insane."

Quite an important law was passed in 1844, "relative to the practice of medicine," amending the penalty and limiting it to only those convicted of gross ignorance or malpractice.

There was another important amendment in 1845:—"An act to incorporate medical societies for the purpose of regulating such practice;" also the same year, "an act to punish the procurement of abortions," and all along from that time you will find many suggestions from the State Society on this subject.

In 1852 we come to the time when action seemed necessary in relation to local boards of health and infectious and contagious diseases, and laws were passed at this period and at many subsequent meetings of the legislature, bearing upon this subject. Up to 1853 the society seems to have been quite cosmopolitan, but at that time an act was passed amending the act to regulate the practice of medicine and surgery, and provided that each County Society could send a number of delegates to the State Society equal to the number of members of assembly for the county. This was one of the most important amendments made by the legislature in reference to the laws bearing upon the work of the society, up to that time, making the society, as it has been since, a strictly delegate body. This law some twenty years later on was further amended, to avoid the sharp practice that had grown up of electing delegates to represent larger cities, from the counties of Fulton, Steuben, or such as failed to send delegates. The progressive spirit of the society was manifested later on when, in 1901, a vote was taken to increase the number of delegates five fold. This has enlarged the representative makeup of the society and undoubtedly did much good in adding to the interest of the last meeting.

It is interesting to note the influence this society has had upon the legislature, in the various laws passed relative to the insane, and establishment of different institutions for their care. In 1864 quite an important bill was passed relative to insane persons in poor houses, insane asylums and other institutions in this state. Later on we all remember with what earnestness the late Dr. Agnew worked to have the present law passed by the legislature, and how thoroughly successful he was. I remember one session of the State

Society when we adjourned in a body to the Capitol, and presented the arguments before the legislature for removal of all insane from the various county poor houses, and to place them in charge of the state institutions. Probably as much good resulted from this one act as anything ever suggested for the care of the pauper insane.

Laws have been passed relative to vaccination and contagious diseases, for the appeal of members of county societies from discipline inflicted, to the State Society; laws relative to medical witnesses; laws excusing physicians from jury duty, many, many such suggestions originating in the State Society, and finally taking the form of enactments in the legislature. So much was seemingly required of the State Society that about 1880 the importance of having a regularly appointed committee on legislation became apparent, and from that time on medical legislation in this State has been largely influenced by suggestions from the State Medical Society or by hearings before the various committees. I am personally cognizant of much bad legislation that was averted and much good that has resulted from the work of this committee. I served for nearly ten years as a member of this legislative committee, and there is an immense amount of work connected with it. One who has not occupied a position of this kind can hardly realize how many bills are introduced from outside that have in them the nature of personality for relief of this, that and the other irregular practitioner of medicine. About 1878 agitation in reference to higher education in medicine reached its maximum, that is previous to real substantial legislation, and it was evident that laws were soon to be enacted lengthening the years of study, preliminary education and final examination. In all this work the State Society took an active interest, and through its legislative committee made an earnest effort to obtain a law for the establishment of a State Medical Board for licensing physicians, irrespective of the origin of their diplomas. It would take a long chapter to detail all the meetings of the various committees, from time to time, in combating the theories of clairvoyants, hydropaths, natural bone setters and all the irregularities possible. I remember with much earnestness our efforts at first to get a State Board made up of members of the existing State societies, that is



our own society, the homeopathic and eclectic society. These societies had been chartered by the legislature and the wisdom of our society was manifested quite early in showing a disposition to respect the laws that had been passed by the legislature in previous years in organizing these respective societies. It was evident that the legislature would not recede from its former position, and that if we were to get a State Board we had at last to compromise in some way. I think a happy solution was reached when the present three State Boards were chartered, giving to each board the same set of questions, except in therapeutics. When once this bill was perfected we did not have very much difficulty in passing it. This part of our State legislation was soon recognized, and you will find that over thirty states have modeled after our law in regard to the State Board of Medical Examiners.

There has never yet been any advance made in the practice of medicine in this State, or the enactment of laws, that have resulted to the benefit of the public or the profession, that has not first received the recognition and endorsement of the State Society.

I shall always remember, in 1880, the passing of the law requiring physicians to register with the County Clerk; prescribing that the diplomas of physicians coming from out the State, if issued by a medical college without the State, should be endorsed by a medical college of this State. This was an entering wedge of the future legislation that resulted in the enactment of our present wise laws. The codification made in 1887, Chapter 647, is quite an important bit of legislation and is as follows: "No one under twenty-one years of age shall practice medicine; no one, unless lawfully engaged in practice, at the time of the passage of this act, shall practice without a diploma from an incorporated medical college of the State, granted after three years of study, and two complete courses of lectures; unless he shall have received a degree from the Board of Regents after an examination by a Board of Medical Examiners of the State; requiring registry with the Clerk of the County where he practiced, prior to which he shall verify by oath that he has complied with the preceding requirements; prohibits from practice anyone who may be convicted of felony, willful false swearing to statements in the registering affidavit; besides other acts, such as

counterfeiting a diploma being made a felony, etc., etc." This law has been somewhat amended since, not improved in all respects.

The law of 1889, in regard to the preliminary education of medical students is an important one, and the following year was established the Boards of Medical Examiners for the examination and licensing of practitioners of medicine and surgery. Laws establishing a State Board of Health, local Boards of Health, appointment of health officers, etc., many times were brought under the observation of the State Society.

Perhaps in no one department has the State Society been so earnest in overcoming vicious legislation as that in regard to special acts and suggestions, from time to time, in regard to the practice of midwifery. These bills have frequently had in them a principle that was decidedly antagonistic to the welfare and morals of the public.

It is yet fresh in our minds as to the work of the society in reference to the care of tubercular patients.

Thus have I, in a very incomplete manner, referred to some of the work that has resulted from suggestions made by the society and the earnest labor exhibited in the past of the legislative committee.

Much more could be said, but I know from conversation with senators and assemblymen, that the State Society occupies a position where much good can come from wise suggestions that may be called for in regard to future laws.

We need to be united as a profession, and we need to continue in the same earnest efforts for elevating the standard of medicine. We have reached a high plane and it is possible that all we require is to control present conditions and rest content; however, watching carefully and exercising wisdom concerning the execution of the laws that are now on our statute books.

This is not the time and place to speak of the work that is being done by the Board of Regents, in carrying out the medical laws of this State, but I can vouch for the earnestness that exists in that board to do all that will be for the good of our profession-at-large. We have in Mr. Parsons, the genial secretary, a man who has looked into medical education with great care, and whose judgment is excellent in the executive department he represents.

FOR THE ANNALS.

## TOXAEMIAS FROM SPIRIT DRINKING.

By T. D. CROTHERS, M. D.,

Superintendent, Walnut Lodge Hospital, Hartford, Conn.

Every physician is familiar with symptoms of disease which are called bilious, malarious or rheumatic, chiefly noted by dull pain, slight fever with general exhaustion and wandering neuralgias and myalgias. These symptoms disappear readily from the use of calomel, salines and other eliminative measures. The modern teachings of medicine indicate that these conditions are simply toxic states, autointoxications and toxaemias from the presence of ferments and bacterial products and also due to failure of elimination and chemical changes of foods in the body.

It is a new fact that many of these toxic states are traceable to the use of spirits, and that persons who drink wine, beer and stronger spirits in moderation or in excess suffer commonly from these obscure disorders. The average moderate drinker who uses spirits at meals or on other occasions, which is not considered to be excessive, is often an invalid and complains of rheumatism, malaria, and suffers from insomnia, dyspepsia and catarrhal difficulties. These symptoms are ascribed to other causes and the connection between the use of beer and spirits is rarely recognized, but if from any cause the person becomes a total abstainer, the disappearance of these symptoms and the general improvement in his health give unmistakable indications of the toxic origin. The use of beer, supposed by many persons to be healthful, is found to be dangerous from the new ferments and bacterial formations which it brings to the body, and the abnormal metabolic changes produced by its presence. While beer and moderate spirit drinkers may seem to have the appearance of health, they suffer from enfeebled heart's action, obscure forms of dyspepsia, catarrhal inflammations, and instability of the nervous system. The appetite is changed and both sleep and work are more or less irregular, and many symptoms of disability are present. It is at this time that the terms rheumatism, malaria, neurasthenia are used to describe the conditions present. Recent clinical studies indicate that next to syphilis alcohol in any form is

a common contributory cause in the production of a great variety of diseased states. This will be apparent from the new studies of the action of alcohol on the organism. It is now fully recognized that alcohol even in small quantities is a narcotic and has a peculiar corroding action on both cell and tissue, impairing its power of growth and diminishing its functional activity. The proteids and albuminous compounds are changed, perverted and become waste products. The narcotic action of alcohol, particularly on the vaso-motor nerves, seriously affects the circulation of the blood, breaking up the normal rhythm and allowing the blood to pass with irregular force and volume, followed by greater strain on the walls of the arteries and veins. Alcohol in the blood diminishes the oxygen carrying properties by destroying the hemoglobin of the blood. The waste products from the derangement of the circulation and the disturbance of digestion are increased and become sources for the growth of toxic germs. Both the liver and kidneys, as well as the heart, are alternatively increased in activity and suffer from diminished nutrition.

The condition is always that of derangement, irritation, narcotism and starvation, from which inflammation and exhaustion is sure to follow. The products of the deranged metabolism become poisons and their presence is manifest in many obscure symptoms. The young physician trained in the technique of modern diagnosis will find in these symptoms evidences of organic disease, while the older physician, with an intuitive diagnostic sense uses the term bilious to express his conception of the diagnosis. The following are some illustrative examples. A lawyer of fifty-two gave up business on the supposition that he had paresis and must die. He had been treated actively for five years and had received the advice and counsel of many of the leading experts of the day. He used spirits habitually at meals and at intervals for many years, before and during the treatment, eating heartily and rarely exercising. The usual pathognomonic symptoms of paresis with gastro-intestinal disturbances, and delusions of grandeur were present and slowly increasing. He was placed under my care to stop the spirit drinking. This was done, and a course of baths and sharp eliminative measures with moderate exercise in the open air was carried on daily for





Recently, a clergyman who was a beer and wine drinker came under my care. A few months before he had been stricken in the pulpit with hemiplegia and unconsciousness. On recovering consciousness great prostration and mental feebleness followed. The physician continued to use strong spirits and large quantities of liquid food to keep up his strength. This man had drunk wine regularly at the table for years and used spirits at other times; also had eaten very heartily. For the last two years he complained of head-aches and intestinal troubles with prolonged periods of prostration. On admission to the hospital, an enlarged liver, fatty heart, albumen in the urine were the most prominent states found. All spirits were abandoned and baths, electricity and massage were substituted. The diet was restricted and exercise in the open air was given daily. Six months later he went to Europe under the care of a physician, living very abstemiously and bathing regularly. He returned a year later strong and well. This was a case of autointoxication.

A still more prominent example was that of a mill owner, who had been well and temperate up to forty-six years of age when, after a trip to Europe, he became convinced that he needed wines as a medicine at meals. For the next five years he regularly drank wine at the table, eating freely of rich foods on the supposition that he needed more strength and vigor with his increased work and age. A year after he began to drink wines attacks of head-aches followed by extreme exhaustion and supposed rheumatic pains in his legs and feet, appeared and were treated by the physician as malariæ. Inflammatory conditions of the joints followed, also insomnia and convulsive attacks of irritability and depression. He then came under my care. Spirits were removed first and restricted diet with active eliminative treatment was carried out for several months, after which he recovered and resumed business again. Two years later he began to use wine again at the table and occasionally spirits were taken. Attacks of rheumatism appeared and with it convulsions which were called epileptic. The physician prescribed spirits at short intervals and used narcotics to prevent the convulsive attacks. A few months after he died from acute pneumonia. This was clearly a case of autointoxication in which the use of wine, rich foods and bad living were



the active causes. The physician failed in not prohibiting spirits and insisting on total abstinence followed by active eliminative treatment.

I have seen a number of cases in which the use of beer taken regularly at meals and otherwise in the day have been followed by symptoms of nervous and digestive derangement which were supposed to come from other causes. Thus an active business man, suffering from fatigue incident to his work, is advised to take beer as a tonic. Later he suffers from head-ache, has gastric disturbances and is unable to walk or to endure muscular exercise without unusual exhaustion. Many of these beer drinkers complain of stupor, want of ambition, and tendency to sleep in monotonous surroundings. Palpitation of the heart, suspicions and doubts, where all was confidence before, neglect of important duties, failure of memory, disposition to be slack in both manners and dress, are many of the symptoms seen among beer drinkers. Their disappearance when beer drinking is stopped is strong evidence of the toxic alcoholic origin.

Recently, a prominent lawyer who has been a beer drinker for years and has been unsuccessfully treated by many physicians for obscure maladies, suddenly became a convert to the Christian Science Faith. He abandoned all use of spirits and lived abstemiously. His recovery was attributed entirely to faith and the power of God. He has become an active teacher and poses as an example of the effect of the higher spiritual laws. In reality, it was simply the removal of spirits and the state of autointoxication.

I conclude with a statement of the necessity of recognizing the poisonous action of spirits whether taken in moderation or excess, and summarize what I wish to make prominent as follows:

1. Alcohol in any form, taken into the body as a beverage, is not only a poison but produces other poisons, and associated with other substances may develop toxins. Alcohol is also an anesthetic and not a tonic or so-called stimulant. It increases the waste products of the body and diminishes the power of elimination. It also destroys the phagocytes of the blood, and thus removes and lessens the protective power of the blood-cells.

2. Whenever alcohol is used continuously as a beverage,

for its medicinal effects; favorable conditions and soils for the cultivation and growth of poisoned compounds are created. These may be neutralized by other conditions and not be apparent in the derangements of the functional activities which follow. Where disturbance and derangements of the nutrient and functional activities of the body are associated with the use of alcohol, their transient character and disappearance by the removal of spirits suggest the causes.

3. The functional and organic symptoms of derangement appearing in those who use spirits in moderation or excess, which quickly disappear by abstinence and eliminative measures, are clear indications of autointoxications from this source. Obscure symptoms of the nervous system in persons who use spirits should always be examined in relation to the toxic origin from this source. Also grave nutrient disturbances should suggest the same cause with the same treatment.

4. The treatment of all such cases, in which alcohol is used in any form, should be by antiseptic and eliminative measures, and the supposition should always include the possibility of poison by chemical products formed in the body.

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## REPORT OF A CASE OF AORTIC REGURGITATION AND STENOSIS AND MITRAL REGURGITA- TION WITH CAPILLARY PULSE.

*Read before the Medical Association of Troy and Vicinity,  
November 7, 1901.*

By WILLARD H. SWEET, M. D.,  
Petersburg, N. Y.

It is my privilege to present to you this case of cardiac disease or diseases, which presents some features of interest. Let us consider cursorily, for our time is limited, some of the general points, which may have some bearing on this case, in reference to valvular disease of the heart.

Valvular heart disease is found in persons of all ages, both sexes, and in all walks of life, although different diseases do bear certain relations to these various conditions. For example, we find mitral lesions occurring more frequently in the young; aortic disease oftener in the middle-aged and old; mitral disease rather than aortic in women; and aortic dis-

eases, especially insufficiency, in those who are compelled to do laborious work for their daily bread. The majority of valvular diseases are due to endocarditis. It therefore follows that while all cases without exception of acute endocarditis do not result in valvular disease, still, we may practically state that the causes of acute and chronic endocarditis are the primary causes of the diseased valves. It is an established fact that excluding surgical injury, two factors are requisite for the production of acute endocarditis, namely, some toxic agent in the blood and traumatism. The toxæmia being present we can easily account for the other by the repeated and forcible apposition of the delicate endothelial membrane which goes to make up the valve. The recognized occurrence of prenatal involvement of the right and postnatal involvement of the left chambers of the heart tend to corroborate this statement although authorities claim that endocarditis does attack the right side in a small percentage of cases after birth. As other causes we have the exanthemata, especially scarlatina and diphtheria, typhoid fever, pneumonia, puerperal fever, gonorrhœa, erysipelas, pyemia, influenza, syphilis, gout, phthisis, diabetes, nephritis, cancer and violent injury. So large a percentage of the cases of valvular disease which have come under my observation, one in the acute stage and in which there was no other ascribable cause, have had associated with them epithelial growths of a malignant nature of the face and neck, that I have considered it to my reputational advantage to search for valvular disease in all such cases. The particular disease which has been found in these cases has been insufficiency of the mitral valves. The fibrous proliferation which accompanies chronic rheumatism frequently produces sclerosis, thickening and deformity of the valves most frequently at the mitral orifice. Arterio-sclerosis and endarteritis may, as well as myocardial affections, produce valvular disease, more particularly at the aortic opening. Not only will continued strain and exertion aggravate valvular disease already existing but these influences may originate aortic incompetency, especially when accompanied by habitual over-indulgence in alcohol. It is claimed by some authorities that mitral stenosis and valvular affections of the right side of the heart, excepting relative tricuspid insufficiency,

may be and most frequently are, congenital; in the case of the right-sided lesions that they are the results of fœtal endocarditis and in that of the mitral lesions, that they are mathematical miscalculations as to the size of the opening required. Like many other unfathomable phenomena in the universe, there are some valvular diseases for which there seems to be no cause, and these for the sake of convenience we call idiopathic.

Authorities are agreed that mitral insufficiency is the most frequent of the valve diseases, but as to which should come next in order there appears to be some diversion of opinion; some say aortic stenosis, others aortic insufficiency; some writers declare that stenosis of the aortic orifice is common; other equally good men, that it is rare. Mitral obstruction occupies fourth place with tricuspid incompetency in the fifth. To the other rare diseases of the right opening it is unnecessary to refer. Combinations of these various affections are very common and of these double aortic disease frequently associated with mitral incompetency, which is so often relative and a conservative measure to prevent fatal dilatation of the left ventricle, is perhaps the most frequently observed. After this in the order of succession come double mitral trouble, mitral regurgitation and tricuspid insufficiency, and mitral constriction and tricuspid regurgitation respectively.

Speaking in a general way, the symptoms of valvular heart disease may be summed up in those of defective nutrition and mechanical interference with circulation. There are the symptoms of cerebral anæmia, embolism and œdema with carbonic acid poisoning and epistaxis; cough with expectoration from bronchial catarrh, hemoptysis, dyspnœa of varying degree, asthmatic attacks, œdema, signs of pulmonary apoplexy and infarction, include the symptoms referable to the lungs.

Precordial distress and pain radiating to the neck and down the arms, especially the left, palpitation and irregular and forcible action direct attention to the heart. Gastro-intestinal catarrh with its attendant symptoms, hepatic congestion leading on to catarrh of the bile ducts and final cirrhosis, infarctions of the spleen and kidney indicated by pain in the left



side and hematuria respectively, albuminuria from renal congestion at first and actual organic disease afterward, dropsy and hemorrhoids characterize the abdominal symptoms. Mental perversion, hemiplegia, monoplegiæ, paræsthesiæ and neuralgia are nervous manifestations and complications of these diseases. Cyanosis, pallor, asthenia and œdema, varying from slight œdema of the feet to general anasarca, comprise the more important general symptoms.

In the matter of prognosis each case is a law unto itself. The factors which govern longevity in these cases are the extent of the lesion, the compensating power of the heart muscle and the possibility and willingness of the patient to conserve this compensation. So long as compensation can be maintained, the patient gets along in comparative comfort and many do follow laborious occupations for years, but in a longer or shorter time, compensatory hypertrophy in the majority of cases fails and then comes the train of distressing symptoms which are all so well known. We may, by rest and remedies, succeed for a time in sustaining the waning compensation, but failure must eventually crown our efforts. Valvular disease occurring in children gives a less favorable prognosis than that of adult life.

I have said little or nothing about the physical signs of these diseases as that would necessitate a careful and detailed description of each individual disease, but it may be necessary to speak of them in part in the analysis of the case before us.

Let us examine the case in hand:

H. W., 58 years of age, white, native of Ireland, married, and a farmer by occupation. His family history elicits nothing of interest.

*Personal History.*—He began to be troubled by indigestion about thirty-five years ago and has never been entirely free from it since. He was operated upon thirty years ago by a dentist in New York for a disease of the antrum of Highmore and a large quantity of pus was evacuated. This operation was followed by a prolonged illness of indefinite character, during which he had fever and delirium, but from which he made as he thought a complete recovery. He has noticed for the last fifteen years that his heart has not acted in a normal manner. He has never had rheumatism nor any serious illness other than as above mentioned. He has used alcohol habitually, sometimes to excess.

*Present State.*—Has no headache, sleeps fairly well, lying comfortably in any position except on left side; no epistaxis; no cough and no expectoration; dyspnœa when walking up hill or upstairs; at times has moderate pain in upper sternal region; frequently has palpitation and

irregular heart action; appetite good, but food sometimes causes dizziness and feelings of faintness; bowels constipated; bladder symptoms normal. He has a tired languid feeling and much of the time aching pains in all parts of the body. He is conscious of a constant throbbing throughout the whole economy.

*Physical Examination.*—Inspection shows lips somewhat cyanotic, capillary pulse in the forehead and nails, great pulsation of subclavian, carotid, brachial, radial and femoral arteries; epigastric pulsation; cardiac impulse seen over an increased area; apex-beat displaced down to the seventh intercostal space and an inch and a half to the left of the mammillary line; no œdema; ophthalmoscopic examination reveals marked pulsation of retinal vessels.

*Palpation.*—A slight thrill may be felt over subclavian and abdominal aorta; pulsation of the vessels noted above; cardiac impulse more forcible and felt over greater area than normally; apex-beat in abnormal position; pulse 76 per minute and regular; some sclerosis of radial and femoral arteries; no œdema.

*Percussion.*—There is a vesiculo-tympanitic percussion note over lungs; area of cardiac dullness increased especially to the left and downward; liver and spleen not perceptibly enlarged.

*Auscultation.*—This reveals a soft blowing murmur most intense at the apex propagated to the left and heard plainly at the angle of the scapula. Over the right second intercostal space is heard a somewhat rough, systolic murmur, propagated to the vessels of the neck and subclavian artery and heard also in the upper interscapular region. Over the aortic interspace may also be heard a diastolic murmur softer in quality than the systolic and best heard over the sternum on a level with the third costosternal articulation, but heard also over the lower sternal region and transmitted towards the apex. At the point of maximum intensity of the aortic insufficient murmur may be heard the characteristic steamtug murmur of double aortic disease. A urinary examination failed to reveal anything abnormal.

In reviewing this case we find no obvious cause and no well marked beginning of this man's valvular diseases. It is possible the septicæmic condition following his operation thirty years ago may have been the starting point of his trouble or it may be due to the strain and lifting incident to his occupation, connected with alcoholism, of which he has been a victim. In the latter case he probably had aortic incompetency at first with the stenosis and mitral insufficiency developing later. One of the remarkable features about this case is the absence of subjective symptoms which usually accompany these cases. He has no headache, but this may be accounted for by the fact that he has mitral regurgitation which acts as a safety valve preventing the greater volume of blood being forced suddenly into the arterial system and by



the concomitant stenosis which tends to sustain the volume of blood and thus relieve cerebral anæmia. There is some atheroma present and I usually expect when I inquire about this symptom in cases of arterial sclerosis that they will give a history of remarkable freedom from it. Compensation must be well preserved and his powers in this direction must be well nigh limitless, for I have had this patient under observation for about nine years and he is apparently as well now as when I first saw him. His freedom from angina would indicate that the coronaries are unobstructed and are performing their functions well. Capillary pulse, which is more distinct in this than in any other case I ever saw, was at one time thought to be pathognomonic of aortic insufficiency. It is now found to be present in some cases of arterio-sclerosis and Osler distinctly states that it may be observed sometimes in profound anæmia, neurasthenia and even in health where there is extreme relaxation of the peripheral arteries. There seems to be a growing tendency to place less reliance than formerly on the mere existence of a murmur in the diagnosis of valve disease. One author declares that they are notoriously uncertain, especially the systolic murmurs. With the exception of the Flint murmur the diastolic murmurs are considered organic. Some even might regard the stenotic murmur in this case as being due to roughness of the aortic valve or intima of the aorta, but it seems to me that the very fact of the existence of this man's disease for so many years furnishes evidence of the beneficial effect of a co-existing aortic obstruction.

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## Clinical and Pathological Notes

*A Case of Dysentery due to Double Infection with the Uncinaria Duodenalis and the Amoeba Coli.* By SAMUEL B. WARD, M.D.

Dr. R. W. A.; 32 years of age; American by birth; residing at Poughkeepsie, N. Y.; married; was admitted under my care at the Albany hospital on February 6th, 1902. He complained of dysentery due to amoebic infection and also that of uncinaria duodenalis, contracted in the Philippine Islands while in the U. S. service.

*Personal History.* Had scarlet fever and whooping cough in childhood; typhoid fever at 19; measles at 20. Since that time has been perfectly well until the present illness. Habits good.

*Present Illness.* On May 1st, 1900, at Silang, P. I., was taken with an attack of acute diarrhoea, was in Military Hospital four days; confined to quarters about a week longer, and after that was again well enough to go on duty in charge of the hospital at Indan, Province of Cavite, but gradually ran down, apparently from nothing but climatic causes, until November, 1900. He never had a formed bowel movement after first attack at Silang; stools were always loose and watery, but only two or three in number per day. There can be little doubt that he had both infections from the first. The attack at Indan was probably an acute exacerbation due to his general debilitated condition. In November, 1900, diarrhoea began again, followed a few days later by dysentery. The usual symptoms were present, consisting of frequent urgent calls to stool, until they became almost constant; severe and continuous tenesmus and griping; great abdominal soreness and tenderness, so that the weight of the bed clothes was almost intolerable; stools consisted of from an ounce and a half to two ounces of mucus and blood. He was the only doctor at this post and had at this time only the care given him by hospital corps men under his own instructions.

Patient was then put to bed; all solid food stopped; laudanum was given until a certain amount of stupor was produced, followed by powdered ipecac in twenty grain doses. Failing to get relief from this he was given ten grains of bismuth subgallate after each stool; later he took, every two hours, guaiacol carbonate three grains, salol four grains, morphine sulphate one-eighth grain and bismuth subnitrate twenty grains, which also failed to produce any improvement. On December 29th, 1900, he was admitted into the General Hospital at Manila, where the diagnosis of uncinariasis and amoebic dysentery was made. At this time the patient had a great deal of pain and tenderness in the epigastrium, which was increased by pressure and somewhat relieved by taking food; appetite good. Under treatment, by means of high injections of tannic acid, ten grains to the quart, and

sulphate of quinine, twenty grains to the quart, he steadily improved. On January 15th, 1901, he was examined by a medical board and ordered back to the United States to be discharged for disability.

. He left Manila on February 1st, 1901; arrived at San Francisco on March 1st, and was discharged from the service March 7th. At this time he thought he was entirely well, and began the practice of medicine in the latter part of April, continuing and feeling quite well until December 15th, 1901, when he became very tired from overwork, and the dysentery recurred with all the symptoms of the first attack, only in milder form. He improved somewhat under treatment at home, but finally concluded to come into the hospital and give his entire attention to getting well.

On admission to the hospital he was having ten or twelve movements in twenty-four hours, with much griping and tenesmus. At this time and subsequently the stools were examined by Dr. George Blumer, director of the Bender Laboratory, with the result of finding the ova of both the *uncinaria* and the *amoeba coli*. The patient was first put on a solution of thymol in alcohol, diluted with water so as to make it the strength of 1 in 2500, with instructions to drink this continuously instead of plain water. High rectal injections of the bisulphate of quinine, 20 grains in water, were given twice a day for about six days, with some improvement but without entire relief. He then fasted absolutely for forty-eight hours, and on February 14th, was given the oleoresin of *felix mas*, one drachm in capsules every two hours and a half for three doses, followed four hours after the last dose by a saline cathartic, which produced six watery stools. On February 16th, Dr. Blumer again examined the stools carefully, but was unable to find either the *amobae* or ova of the *uncinaria*, though some pus was still present. He returned home on February 21st, being advised to continue the quinine enemas for a month to make sure of permanent cure.

At the date of his discharge from the hospital he appeared to be entirely well, having bowel movements only when given the quinine enemas. Appetite and digestion good. Gaining in weight and strength rapidly.

Kept up the quinine enemas from time he left the hospital

until about April 15th, 1902; since then has been entirely well. Had one or two bowel movements per day almost always formed, never watery. Had made no examinations (microscopical) in some time. Appetite splendid. He eats and digests well all kinds of food and is not obliged to deny himself anything. Sleeps well and does a fair day's work every day. When he first came home he was very busy and found that he became tired easily. Being called out once at night and then attending to his practice the next day did him up completely. He had to be very careful of his diet, as he had some disturbance of digestion, heartburn, flatulency or borborygmi. Has gained in weight steadily until is now about his normal weight, 211 pounds, on May 22nd, 1902.

June 2, 1902.

*Report on Dr. R. W. A.'s stools.*—The specimen which was examined was passed in the laboratory and was examined immediately. The specimen consisted of approximately 50 cubic centimetres of mucus mixed with blood. There was practically no fecal matter.

Microscopic examination showed the presence of large numbers of typical amoebæ coli. These were actively motile, and in a great many instances contained in their interiors red blood corpuscles and small particles of foreign matter. There was a good deal of blood present, and also a large amount of pus. There were present in fair numbers in the stools the ova of some parasite. They averaged .05 mm. in length, and about 0.3 to 0.4 mm. in width. They consisted of a rather refractive outer capsule, in which was contained a granular protoplasm, usually in the form of three or four segments. Very often there seemed to be a clear space between the capsule and the protoplasm. The bloody mucus was mixed with a little bouillon and put in the thermostat at C 37°. At the end of 76 hours a single embryo was found in the mixture of bouillon and mucus. Both the ova and embryo were seen by Dr. W. S. Thayer of Baltimore, who identified them as the *uncinaria duodenalis*.

GEORGE BLUMER.



## Editorial

There must be an instinct that recognizes a disease and suggests its remedy, as much as an instinct that finds the right notes and harmonies for a composer of music or the colors for a true artist's picture. Men and women may learn their callings from others; may practice all the combinations until they can carry them through with a greater or less degree of unconsciousness of brain and fingers; but there is something needed besides drill and experience: every student of medicine should be fitted with a growing insight, a gift for his business, a God-given power in his own nature of using and discovering the resources of medicine without constant reliance on the books or the fashion.

SARAH ORNE JEWETT.

*A Country Doctor.*

### A Retrospect and a Prophecy

The ALBANY MEDICAL ANNALS was established in 1880, for the purpose of perpetuating the records of the Medical Society of the County of Albany. In 1851 there had been published through the efforts of the late Dr. Sylvester D. Willard, who was an indefatigable annalist, the first volume of the Transactions of the Society from its organization to 1851, and in 1872, a second volume, bringing the minutes to 1870, was issued by a committee consisting of Drs. James S. Bailey and Charles H. Porter. With the earlier issues of the ANNALS, Dr. Frederic C. Curtis, upon whom has fallen the mantle of Dr. Willard, which he continues most worthily to wear, published the minutes of the Society from 1870 to 1880, and thus completed a companion volume. The need of a medical journal in Albany had become apparent, and the periodical publication was continued, first under the auspices of an ephemeral Medical Library Association, and later as the organ of the Alumni Association of the Albany Medical College, which it still represents.

Albany may be designated a provincial medical centre, developed upon the demand for medical instruction and special medical practice by localities beyond the reach of the large cities. The need of a medical school and a completely equipped hospital is as great as it was seventy-five years ago, and the same high standards are required. The neighboring country sends to Albany young men for their medical education and patients for the refinements of practice in special departments, either medical or surgical, for which a smaller town is not and cannot be equipped. These

requirements are more pressing now than a half century ago, when the only specialty was surgery, and even surgery was a large part of the practice of every physician. In the generation represented by the ANNALS, the entire system of medicine has changed. A dozen different specialties have reached a degree of exactness which places them beyond the resources of the general practitioner. Among these, bacteriology has developed into a special science. At first of only academic interest, this department, allied with clinical pathology, has transformed medicine from an art to a science. It has been recognized in Albany by the organization of a special laboratory, which is the mile stone of progress, and representative of a complete medical institution.

As a stimulus to endeavor and a reward of effort the publication of discoveries and of studies takes a leading place.

The ANNALS has thus developed and grown step by step with the changes in local organizations. It is the outward and visible sign of the medical grace of Albany. Until the present year the ANNALS has been edited by practitioners, but now gives recognition of the important part played by the laboratory. The sense of this need has led to a change in the editorial staff. After six years of successful administration by Dr. MacFarlane and Dr. Mosher, the ANNALS now extends its usefulness by the appointment of Dr. George Blumer. Pressed by duties in other directions and by his growing practice Dr. MacFarlane has obtained from the Publication Committee his release. The present standard of excellence of the ANNALS is the monument to his labor. Dr. Blumer brings to the journal a very clear conception of what such a publication should be, high literary attainments and incisive forms of expression. His training has been in the direction of practical laboratory work, and from his co-operation may be expected an interweaving with clinical experience of the useful facts of bacteriology and pathology which are immediately available in bedside practice. Dr. MacFarlane's sympathy and co-operation are assured by his appointment to the Publication Committee. In the completed organization are now represented the practising physician, the surgeon, the chemist and the bacteriologist and pathologist. It is not too much to say that the best interests of medical Albany will continue to be recognized in its journal, and that the journal will deserve, as in the past, the approval of its readers.



## Scientific Review

### SOME ASPECTS OF THE PATHOLOGY AND BACTERIOLOGY OF TYPHOID FEVER FROM THE STANDPOINT OF RECENT INVESTIGATIONS

It is proposed in this review to briefly review certain phases of the pathology and bacteriology of typhoid fever, avoiding in the main the purely technical aspects, and laying stress on those points which have more or less bearing on clinical medicine.

In the last few years certain changes in our ideas as to the distribution of the typhoid bacilli in the body have taken place. Up to within a very few years we were apt to regard the occurrence of the typhoid bacillus outside of certain of the abdominal organs as exceptional, so that within four or five years we find cases in which only a few bacilli were present in the blood reported as exceptional cases and described as typhoid septicaemia. The observation of typhoid bacilli in rose spots, in the bile, and in the urine, is also of relatively recent occurrence, and I therefore propose to briefly summarize our present knowledge on these subjects.

In 1885, three years after the discovery of the typhoid bacillus, Fraenkel and Simmonds succeeded in isolating the organism from the blood in one out of six cases. Following their report a large series of observations were made by different authors with almost entirely negative results, and it was quite generally concluded that the organism only entered the circulation under exceptional conditions. It was not until four years ago that Kühnau, struck by the discrepancy between these findings and the frequent occurrence of typhoid lesions in situations to which the bacilli must have been carried by the circulation, hit upon the explanation of this apparently paradoxical condition. With his knowledge of the germicidal action of the blood and of the methods of blood culture then in vogue he realized that in all probability typhoid bacilli were present in the circulating blood and were transferred to the culture media, there to be destroyed by the germicidal action of the blood serum. He thereupon made a series of cultures from the blood of typhoid cases in which he diluted the blood to a large extent before making his final

inoculations. His reasoning proved correct, and he was able to isolate the typhoid bacillus from the blood of eleven out of forty-one cases. Since his discovery various authors have confirmed his results, though the percentage of successes has varied. Taking the figures of Kühnau, and the later ones of Schottmuller, Auerbach and Unger, Castellani, Cole and Hewlett, we have a total of 154 cases in 98, or a little over 63 per cent., of which the typhoid bacillus was isolated from the blood. The experience of all these later observers indicates that in order to obtain success large quantities of blood secured in a strictly aseptic manner and largely diluted are required. Apparently the presence of the typhoid bacilli in the blood does not necessarily indicate a severe case of the disease, though it would seem possible that if some method of computing the number of bacteria present could be devised it might be of prognostic value. The practical value of the test lies in the fact that the bacilli are sometimes present in the blood before the Widal reaction has developed. This was the case in three out of Howlett's twenty-four cases and in five out of Cole's fifteen cases.

Closely associated with the presence of the typhoid bacilli in the blood is their occurrence in the rose spots. The same factors which interfered with their isolation from the blood also interfered with their isolation from rose spots. Neufeld seems to have been the first who took advantage of the knowledge that great dilution of the blood from the rose spots was needed. He recommends diluting the blood with sterile bouillon as it escapes from the punctured rose spot, and also suggests scraping the sides of the puncture with a sterile knife and inoculating the juices thus obtained. A series of cultures taken from the rose spots of sixty cases by Neufeld, Curschmann, Richardson, and Krause showed typhoid bacilli in forty-three, or over seventy-one per cent. It is generally necessary to take cultures from several rose spots in each case, and the early spots seem more likely to contain the bacilli than the late ones. Eugene Fraenkel excised rose spots, kept them in bouillon at body temperature for two or three hours, and then sectioned them, demonstrating the typhoid bacilli in the lymph spaces. This method, however, is neither so accurate nor so painless to the patient as mere incision. The value of taking cultures from rose spots

is the same as that of taking cultures from the blood, the bacilli can in some instances be detected before the Widal reaction appears.

The occurrence of typhoid bacilli in the urine is of importance mainly from a prophylactic standpoint, though occasionally of diagnostic value also. The points of importance in this connection are the percentage of cases in which typhoid bacilli occur, the time at which they appear, their number, and the length of time which they may remain in the urine. Practically all who have investigated this subject agree that as a rule the bacilli do not appear in the urine until relatively late in the disease. As far as can be judged by the figures at our command, in most cases in which bacilli are present they do not appear until the end of the second week. In some cases their appearance is much earlier. Richardson observed them as early as the eighth day, and they were probably present at an earlier date. In some cases their appearance is very late, the writer observed one case in which they were not present till the forty-second day of the disease. The percentage of cases which show bacilli varies considerably according to different observers; some of the earlier observers claimed their presence in a large proportion of cases, Karlinski in nearly fifty per cent. for example, but these observations are doubtful as at this time the methods of differentiating typhoid from colon bacilli were inaccurate. Schüder, who collected 599 cases from the literature, found the presence of typhoid bacilli recorded in 177, or a little over twenty-nine per cent. of the cases. The number of bacilli present in most cases is simply enormous; most writers have not attempted to estimate it. Petruschky, however, did so in three cases, and gives the maximum figures as 20,000, 5,000,000 and 172,000,000 typhoid bacilli per cubic centimetre respectively. Some idea of the number which may be excreted daily may be gained by these figures. Estimating the urine excreted at 500 cubic centimetres, or about one-third normal, the last case would have excreted 8,600,000,000 bacilli daily when the process was at its height. In a number of cases the bacilli persist long after the convalescence of the patient and in those cases in which an actual cystitis is present the bacilli have been demonstrated as long as six years after the attack of typhoid. The danger from such

cases can readily be appreciated, and the conclusion is forced upon us that it is just as important to carry out routine disinfection of typhoid urine as it is of typhoid stools. It is well to bear in mind also that many of those cases have no symptoms whatever to attract attention to the urinary tract, and in fact suffer no inconvenience from the presence of the bacilli. In some instances a definite nephritis or cystitis is present. The isolation of the typhoid bacilli from the urine is of diagnostic value in a few cases in which the Widal reaction appears late; in a small percentage of such cases it is possible to isolate the typhoid bacillus from the urine before the blood test is positive.

The occurrence of the typhoid bacillus in the bile was first emphasized by Fütterer and Anton in 1888; they detected the organism in two cases in this situation and from experimental work with other organisms concluded that the bile really had very little inhibitive power over the growth of bacteria. They also suggested that disease bacteria might remain latent in the bile, and later pass into the intestine in large numbers, an idea which was later introduced by certain observers, Chiari in particular, to explain cases of relapse in typhoid. The experimental work of Welch and Blachstein in 1891 called attention to the fact that typhoid bacilli after introduction into the circulation soon appear in the bile and often remained there for months, long after they had disappeared from other parts of the body. J. L. Nichols showed that in rabbits the typhoid bacilli appear in the bile six hours after their introduction into the veins. In the human subject Flexner found typhoid bacilli in pure culture in fifty per cent. of all typhoid autopsies specially examined as to this point. In fourteen autopsies observed by the author the bacillus was present in the bile in thirteen, and in the remaining case contamination of the culture was present and its presence could not be positively excluded. The practical importance of these observations lies in the fact that a certain percentage of typhoid cases present complications on the side of the biliary system. These may be inflammatory in character and take the form of a cholecystitis or a cholangitis, or gall stones may occur some time after the attack. The cholecystitis may occur early in the attack of typhoid, and may or may not give rise to marked



symptoms. In some cases the lesion has only been recognized on the autopsy table, death being frequently due to perforation of the gall bladder; in other cases the lesion is perfectly plain during life and may be diagnosed clinically. In certain cases the gall bladder lesion seems to take the place of the ordinary intestinal lesions which are slight or lacking. Particular interest attaches to the relation of such cases to gall stones. Undoubtedly gall stones may antedate the typhoid attack and predispose the gall bladder to infection. In many cases however the gall stones occur with certainty after the attack of the typhoid, and rarely gall stones containing typhoid bacilli are found without any history of such an attack. The typhoid bacilli have been isolated from the bile in some cases as long as seven years after the fever. Of particular interest is the observation of Richardson, later confirmed by Cushing, that the typhoid bacilli in the later stages of infection occur in the bile in clumps. Richardson describes the phenomenon as a gigantic serum reaction, and suggests that such clumps may form the nuclei of gall stones. The bacilli in most of these cases probably reach the bile by the blood, as experiment, and their frequent occurrence in pure culture would indicate, in some instances they may pass up the bile ducts from the intestine, but this is probably rare.

In connection with the pathology of typhoid fever, the so-called typhoid fever without intestinal lesions, and the advance in our knowledge of the histology of the disease are of interest.

As early as 1841, Louis had been led to believe from his typhoid studies that cases occurred without the usual lesions in the intestine, and Brunschwig, in 1870, expressed doubt as to the constancy of intestinal lesions. The subject, of necessity, could not be definitely cleared up until after the discovery of the typhoid bacillus, and we find the first instances of this form of the disease in which bacteriological tests were made reported in the late eighties. Doubt must however be cast on many of the early cases on account of the imperfect identification of the typhoid bacillus, and Ophüls throws out even most of the more recent ones as not coming up to the strict bacteriological requirements. In view of the recent work on organisms closely allied to the typhoid bacillus



it must be admitted that these criticisms are in a measure fair, and that from the bacteriological viewpoint, not only cultural criteria are necessary, but also the use of the agglutination reaction. The number of cases reported with absence of intestinal lesions is now considerable if we include those in which the typhoid bacillus was identified by the more modern bacteriological methods. M'Phedran, in 1899, collected twenty-seven cases and added one of his own; of these twenty-eight cases twenty-two were in all probability typhoid. The frequency with which such cases occur has not, so far as I know, been estimated. They are probably not infrequent, for in a series of twenty-one typhoid autopsies in Albany we met with three definite cases of typhoid fever without intestinal lesions, and a fourth case in which typhoid bacilli were found four months after the attack in the liver, bile, kidneys and uterus. As Opie and Bassett pointed out in reporting a case of hemorrhagic typhoid fever with very slight lesions of the intestine, the cases in which there never has been any intestinal lesion are probably very rare. In only a few cases has the autopsy been made during one of the first four weeks of the disease with absolutely no intestinal lesion. Some of the cases reported as typhoid without intestinal lesions show slight lesions of the lymphatic apparatus, and others die at so late a date that slight lesions might easily have healed leaving no trace. Some cases on the other hand have been associated with intestinal tuberculosis, the typhoid bacilli having entered through the tuberculous ulcers, causing none of the usual typhoid lesions. The possible origin of these cases is of interest. Do the bacilli enter in the usual way through the intestinal tract, or may they reach the circulation by some other route? Whilst the possibility of entrance through channels other than the ordinary cannot be denied, it seems likely that the bacilli in most cases enter through the intestine. Of sixteen cases from the literature in which the condition of the mesenteric glands was definitely noted, they were enlarged in twelve, and in some of these the spleen was normal. It is to be noted that many of these cases show large numbers of typhoid bacilli in the blood and urine which should render diagnosis during life possible in most cases where the Widal reaction is absent, as it is particularly liable to be in cases of typhoid septicaemia.

It is undoubtedly true that the discovery and study of the typhoid bacillus led for a time to a neglect of the study of the histology of the disease. In fact up to 1898 practically no histological studies of any great importance had been made since 1875 except of those of Reed, in 1895, and Ribbert, in 1896. Our knowledge of the histological lesions was fragmentary, and even an approximate idea of the sequence of events in the development of the lesions was lacking. Since Mallory's classical work in 1898 all this is changed. The lesions which he describes and pictures have since been seen and confirmed by other observers, and may be accepted for the most part as final. Mallory's work shows that the lesions are almost certainly due to the action of the diffusible toxine of the typhoid bacillus. This causes in the first place a proliferation of the endothelial cells, not only in the intestinal lymphatic apparatus, but also in the mesenteric lymph glands, spleen and liver, and to a lesser extent in other organs. The endothelium involved is that covering the trabeculae of the lymphatic apparatus, and also that of the lymphatics and veins. The proliferated endothelial cells take on phagocytic properties and engulf lymphoid cells and red blood corpuscles. The later changes of the disease, i. e., the necrotic processes in the intestines, lymph glands, liver and spleen are in a sense accidental. The necroses in the intestine, mesenteric glands and spleen are due to the formation of thrombi which originate in the veins as the result of the destruction of proliferated endothelial cells, associated with fibrin formation. The necroses in the liver are mainly due to the plugging of the narrowed capillaries by large phagocytic cells carried to this organ by the portal circulation. Such are the main points which Mallory's work brings out.

GEORGE BLUMER.

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### In Memoriam

JAMES H. TIMMERS, M. D.

Dr. James H. Timmers, who graduated from the Albany Medical College in the class of 1891, died at Buffalo, N. Y., November 24, 1902, aged 34 years. Dr. Timmers had been an invalid the greater part of the time since graduation and

had not been active in medical practice. At the class reunion in 1901, it was reported that he was engaged in other work but expected to resume practice. He is survived by a brother, Dr. Garrett W. Timmers, of the class of 1897, who is engaged in active practice at Castleton, N. Y.

### GILBERT W. THOMAS, M. D.

Dr. Gilbert W. Thomas, of the class of 1898, is reported in an associated press dispatch to have been burned to death on December 11, 1902, at Little Rock, Arkansas. The particulars of this calamity have not been received. Dr. Thomas was formerly of Rensselaer, N. Y., and later removed to the west.

## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, NOVEMBER, 1902

### Deaths

	1901	1902		1901	1902
Consumption .....	13	18	Broncho-pneumonia....	1	6
Typhoid Fever .....	0	6	Apoplexy.....	10	6
Diphtheria .....	9	2	Bright's Disease.....	13	18
Whooping-cough.....	0	1	Accidents and Violence	7	8
Cancer .....	8	13	One year and under....	11	14
Pneumonia.....	8	19	Seventy years and over.	37	32

### Deaths in Institutions

	1901	1902
Albany City Hospital .....	8	14
Albany Orphan Asylum .....	3	0
County House .....	4	6
Home for Friendless.....	0	1
Homeopathic Hospital .....	2	0
Hospital for Incurables.....	1	0
House of Good Shepherd.....	1	0
Little Sisters of the Poor.....	3	1
Public places.....	2	0
St. Peter's Hospital .....	3	3
St. Margaret's House.....	0	2

Total number of deaths for November, 1901, 124; total number of deaths for November, this year, 156.

Death rate for November, 1901, 13.40; November, 1902, 17.08.

Death rate for November, 1902, less non-residents, 15.77.

Marriages..... 57      Births..... 96

#### WORK OF HEALTH PHYSICIANS

Number of assignments made during the month..... 47

Number of calls made during the month..... 214

#### INSPECTIONS

During this month 32 meat markets were inspected, 20 milk peddlers inspected, 4 milk rooms, 3 milk peddlers' violations were found, 4 fish markets were inspected and 3 slaughter houses.

Twenty-five nuisances were inspected, of which 3 were of privies, 6 of closets, 9 of plumbing, 2 water, 1 filthy yard, 1 filthy premises, 1 chicken nuisance, 1 garbage nuisance and 1 dump nuisance. Fifty-one re-inspections were made and 25 nuisances were found to be abated, 6 complaints were found to be without cause.

In the plumbing department, 191 inspections were made, of which 95 were of old buildings and 96 of new buildings. Forty-four iron drains were laid, 23 connections with street sewers, 34 tile drains, 14 urinals, 39 cesspools, 30 wash basins, 41 sinks, 28 bath tubs, 15 wash trays, 6 trap hoppers in yards, 72 tank closets, 1 slop hopper. One hundred and thirty-five permits were issued by the department, of which 114 were for plumbing and 21 for building purposes. Thirty-four plans were submitted, of which 2 were for old buildings and 32 for new buildings. Six houses were tested on complaint, of which 1 was blue test and 5 peppermint test, and 16 water tests were made. Eighteen houses were examined on complaint, 15 being valid and 3 without cause.

#### BUREAU OF CONTAGIOUS DISEASES

	1901	1902
Typhoid fever reported .....	4	4
Diphtheria and croup reported.....	90	48
Scarlet fever reported .....	5	5
Chickenpox reported .....	7	12
Measles reported .....	5	1
Whooping-cough reported .....	0	2

Number of days quarantine for diphtheria:

Longest..... 49      Shortest..... 9      Average..... 26

Number of days quarantine for scarlet fever:

Longest..... 42      Shortest..... 26      Average..... 35

Number of fumigations:

Houses..... 43      Rooms..... 94



## ANTITOXINE

Number of cases of diphtheria in which antitoxin was used.... 40  
 ...Number of cases of diphtheria in which antitoxin was not used 8

There were two deaths from diphtheria after the use of antitoxin. One was 10 years old, sick 8 days and antitoxin was used on the fourth day. Complicated by health failure. The other was 2 years 7 months old, was sick 8 days, antitoxin being used on the third day. Complicated by cardiac paralysis.

## BENDER LABORATORY REPORT

## Cultures for diphtheria:

First positive	First negative	Release positive	Release negative
32	50	49	43
	Spoiled.....	8	
Total.....			182

MEMORANDA FROM THE REPORT OF THE HEALTH AUTHORITIES OF THE CITY  
 OF MANILA, P. I., FOR THE MONTH OF MAY, 1902

One thousand five hundred forty-seven deaths occurred among the permanent residents of Manila, and 112 among transients. Four hundred fifty-five cases of the total number resulted from Asiatic cholera, most of which were among Filipinos. The average death rate amounted to 65.81 per thousand. This mortality is about double the normal rate, and it is caused by the large number of deaths from cholera. It is probable that a very much larger number of deaths occurred from cholera than was entered as such. These cases returned by physicians under some other name.

The energies of the Department of Health of the City of Manila have been devoted to stamping out cholera, and but little else has been attempted. The entire office force was necessary for this purpose.

Twenty thousand three hundred vaccinations were made in the City of Manila during this month and in addition 44,500 points were given away, of which 12,000 went to the army, 11,000 to the navy, and 20,000 to the inhabitants of the Archipelago. Nine new cases of smallpox were reported.

## SMALLPOX IN MINNEAPOLIS

The yearly report of the Commissioner of Health of the City of Minneapolis gives 361 cases of smallpox for the year 1901. Of this entire number but one had been vaccinated recently and only three had ever been vaccinated.

## THE HEALTH OF THE CITY OF HAVANA

The City of Havana still remains an extremely healthy city, and has a death rate smaller than Baltimore, New Orleans, New York, San Francisco, Liverpool, Manchester, Edinburgh, Barcelona, Madrid, and many other American and European cities.

Six consecutive months have now passed without a case of yellow fever in the city and it is believed that this disease has been eradicated from Havana.

The statistics in regard to the decrease of the number of deaths from malarial fever, are as remarkable as those of yellow fever. In the year 1900 there were 350 deaths from malarial fever; in the year 1901 there were 151 deaths from the same disease; in March, 1902, there were four deaths. It has cost the city \$50,000, employing 100 men for one year to collect the mosquitoes, which were believed to have been the cause of these two diseases.

The result of this expenditure has been the saving of four hundred lives from yellow fever and two hundred and fifty lives from malarial fever in one year.

The work of the Health Department is now directed toward eliminating the number of deaths from tuberculosis. By one means or another, 2,500 cases have been located. These names have been carded with residence and other data and popular literature sent to them, explaining their disease and its communicability and the best manner of cure.

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## Society Proceedings

### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held in Alumni Hall, on Wednesday evening, December 10, 1902. The meeting was called to order at 8:45 P. M., the President, Dr. Ward, in the chair. The following members were present: Drs. Babcock, Bartlett, Bingham, Blumer, Cook, Elting, George, W. H., Goewey, Lanahan, Lomax, Macdonald, Moore, C. H., Neuman, Richardson, Root, Sweet, E., Vander Veer, A., Ward, Wiltse: as guests, Gorham, Hacker, Lewi, M., and Smelzer.

1. *Reading of the minutes of the last meeting.* The minutes were adopted as printed in the ALBANY MEDICAL ANNALS for December, 1902.

2. *Applications for membership.* No names were presented.

3. *Reports and resolutions.* None were offered.

4. *Presentation of papers.*

Dr. HOWARD E. LOMAX read a paper entitled "Infantile Diabetes, with a Report of Cases."

The PRESIDENT declared the very interesting paper of Dr. Lomax open for discussion.

Dr. BLUMER: In view of the fact that congenital syphilis is so frequently associated with lesions of the pancreas, he desired to ask Dr. Lomax whether he had found any references in the literature to its relationship to infantile diabetes.

Dr. LOMAX said that after a careful study of the literature he had been able to find none of the authorities who believed that a relationship existed between these diseases.

Dr. VANDER VEER wished to ask whether Dr. Lomax had found any cases of infantile diabetes that had recovered.

Dr. LOMAX said that he had found an indefinite reference to one such case.

Dr. COOK reported a case of diabetes in a young boy of ten years in which, apparently, recovery followed a well regulated diet and careful medical treatment. The urine was examined for a long time, and found to constantly contain sugar, but it had since entirely cleared up and the patient has remained well.

Dr. MACDONALD said that from the paper of Dr. Lomax, one would infer that certain of these cases of infantile diabetes had resulted from injuries to the head. He said that the association of sugar in the urine with injuries to the spine and head is not at all uncommon, but that these cases do not present the ordinary characteristics of diabetes. He further said that diabetes is not so valuable a diagnostic symptom of pancreatic disease as many are inclined to believe, and quoted Mayo Robson as stating that unless the entire pancreas is put out of function absolutely, there is no glycosuria. There seems to be an important relationship between the degeneration of the islands of Langerhans and diabetes.

Dr. WARD said that there was one point especially worthy of mention in this connection, and that related to the tests for sugar in the urine. He reported a case which he saw in New York City in 1870, in which a diagnosis of diabetes had been based upon an orange yellow precipitate, which was obtained with Fehling's solution. Careful investigation of this case, by means of other tests, had shown that it was not a case of diabetes. He stated that, in his experience, practically all of the copper tests were unsatisfactory except one, devised by Rose. The distinct copper red precipitate with an entire clearing up of the supernatant fluid was always definite proof of the presence of sugar. In recent years, he stated, he had seen several cases in which diabetes had been erroneously diagnosed, because of the presence of a dirty orange yellow precipitate, with the copper tests.

Dr. LOMAX wished to state that in the cases he had reported, he had relied chiefly upon the fermentation test, and that it had been performed very much more frequently than the copper tests.

Dr. BARTLETT wished to mention a fact which had come under his observation a number of years ago, when in making an insurance examination he had used the picric acid test, and had found sugar in the urine. He made a number of examinations of the urine from this patient, and in nearly every instance obtained what appeared to be a sugar reaction, with picric acid. The medical director of this insurance company had recommended the use of Haines' solution, laying especial emphasis upon the red precipitate and the clearing up of the supernatant fluid. He had learned from several authors that the presence of sugar did occur now and then under normal conditions.

Dr. WILTSE wished to ask Dr. Lomax whether any of his cases had presented any evidences of pruritus. He had observed some cases of diabetes in which pruritus was the first symptom complained of.

Dr. LOMAX said that in one of his cases pruritus was quite marked, but none of the cases had presented any boils or carbuncles.

Dr. ARTHUR W. ELTING read a paper entitled "The Symptoms and Treatment of the Weakened Foot, with Illustrative Cases."

The PRESIDENT declared the paper open for discussion.

Dr. NEUMAN wished to ask Dr. Elting whether some of the cases reported by Weir Mitchell as "painful feet" may not have been of the nature described in the paper.

Dr. MAURICE LEWI wished to accept the invitation extended to him to use the privileges of the floor. There was one feature of Dr. Elting's paper which did not appear to him to be scientifically correct, which was the statement that Hebrews and Africans have abnormally low arches. He felt that flat foot was no evidence whatever of Semitism, and thought of Dr. Elting would accompany him to Temple Beth Emeth upon the occasion of an assemblage there, he would find as well shapen a collection of feet as could be found in the city of Albany. He hoped that Dr. Elting would eliminate this statement from his very excellent paper before it was published. He believed that the paper was a most timely one and would have a great deal of influence. He had, for a long time, interested himself in the various deformities of the feet, and had found that it was a branch worthy of more attention. He believed that much of the quackery practiced to-day results from the fact that the details of medicine and surgery are not properly attended to or taught in medical colleges. He stated that nine-tenths of the people suffer from abnormalities of the feet, and he could not understand why the subject was so generally neglected. His own experience had been very akin to that of Dr. Elting and he had recently seen a woman who had suffered for years, merely because no one had recognized the existence of sunken arches. Another case was that of a man who had been examined by eminent physicians and surgeons without relief, until finally someone recognized the condition of the feet, and recommended the proper treatment, and he recovered. Another case was of a man who was supposed to be suffering from locomotor ataxia, which was cured by properly adjusted plates. He believed that medical students should be better instructed in the minor details, such as the care of the feet, and he knew of no medical college where proper attention was devoted to this subject. He wished to express his thanks for the privilege of discussing the paper.

Dr. MACDONALD said that he felt it was always an excellent scheme to have things authoritatively settled, especially regarding the feet, and he thought that Dr. Lewi was probably qualified to discuss the racial features of feet. He said that the weakened foot, while it is a matter of minor surgery, is frequently productive of a maximum of discomfort. The weakened foot is apt to be associated with the question of avoirdupois, bad shoes, etc. In his own experience he had found that his own feet had given him a great deal of trouble after wearing operating room shoes; this discomfort was entirely relieved when he wore his customary shoes in the operating room. The weakened foot is almost a professional disease among nurses. He felt that it was a very commendable thing to advise other people as to what shoes they should wear, but that the so-called ideal shoes are not often of great attraction so far as looks are concerned, and he did not consider the Sampson shoe at all beautiful. He



believed that there was a midline of shoes which would benefit the feet greatly, and he also felt that there was much advantage to be obtained from wearing braces inside the shoes. He said that he had formerly made the mistakes of sending patients to the shoemaker or instrument maker to have their feet corrected, which, however, he no longer did, for it is often difficult enough to have the braces properly made even when an accurate model is supplied the mechanic. He considered that temporarily the employment of soft wool felt as mentioned by Dr. Elting is of great value, especially in the cases of tender feet. He quite agreed with all that Dr. Elting said of the importance of giving the feet a careful examination, especially when symptoms are referred to the knee which on examination proved normal.

Dr. RICHARDSON felt that there remained but little which could be said, but that he had noticed one etiological factor in the development of the weakened foot which had not been mentioned, and that was dancing which, in a case recently observed by him, had appeared to be the starting point of the disturbance.

Dr. ELTING, in closing the discussion, said that in reply to Dr. Neuman's question he had felt that very probably some of the cases reported by Weir Mitchell as instances of tender feet, had been really weakened feet, in which, if the proper treatment had been carried out, the results would have been more satisfactory.

In regard to Dr. Lewi's criticism of the inaccuracy of his statement regarding the abnormally low arches observed in the Hebrew, he was forced to admit that the statement was not based upon his own observations, for his experience with the treatment of the feet in this race had been comparatively limited. It is, however, a fact that nearly all the leading textbooks upon orthopedic surgery, as well as certain of the anatomies and anthropologies, do make the statement that the Hebrew race is characterized by an abnormally low arch. Dr. Elting wished briefly to refer to a case which he had seen too recently to be incorporated in the paper, but which he believed to be an instance of meralgia paræsthetica, due to weakened feet. The case was one which he had seen in consultation with and through the courtesy of Dr. Gorham, who had recognized the weakness of the feet, and believed that it bore some relationship to the symptoms complained of. The patient was a woman of 57 years, whose trouble dated back about ten years, and who, for the first five years of her ailment, had consulted the best physicians and surgeons she was able to find. Various diagnoses, such as sciatica, rheumatism, gout, etc., had been made, but all of these evidently incorrect, and all treatment without avail. The condition had gradually progressed until the woman had become unable to walk, certainly for any distance. All the pain of which she complained was localized upon the anterior and lateral portions of the thigh and corresponded exactly to the distribution of the external femoral cutaneous nerve, where there were both tenderness and paræsthesia. The point of exit of the nerve from the pelvis on both sides was distinctly sensitive, more marked upon the right side, which was where the trouble began and where it was more severe. The patient had for many years weighed more than 200 pounds, and upon close questioning, the fact was revealed that

since girlhood she had had weak ankles and other symptoms of weakened feet were developed, more marked on the right side. Examination of the feet showed them to be extremely weakened, particularly the right. Dr. Elting firmly believed that the meralgia was in all probability the result of the weakened feet, and that it would be greatly relieved, if not entirely cured, by the adjustment of proper supports for the feet. Whether all the trouble in the thighs would be eradicated was rather doubtful, because Pal has shown that in those cases in which the condition has existed for many years, the prognosis as to complete relief from all discomfort in the region of the external femoral cutaneous nerve is rather uncertain.

Moved to adjourn, seconded, carried.

SAMUEL B. WARD, *President*.

ARTHUR W. ELTING, *Secretary*.

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#### MEDICAL ASSOCIATION OF TROY AND VICINITY

A regular meeting of the Medical Association of Troy and Vicinity was held Tuesday evening, December 2, 1902, at the office of Dr. D. W. Houston. The President, Dr. J. W. Morris, presided and thirty-nine members were present.

*The minutes of the preceding meeting were read and approved.*

The following physicians were elected to membership: Drs. A. S. M. Chisholm and E. B. Daley, Bennington, Vt.; L. B. Newton and C. W. Bartlett, North Bennington, Vt., and J. B. Hull, Williamstown, Mass.

The following names were proposed for membership: Dr. Alma E. Beale, Schaghticoke, N. Y., and Dr. George P. Paul, Troy, N. Y.

Dr. R. A. KIRKPATRICK reported a case of elephantiasis and exhibited photographs of the case. The paper was discussed by Drs. H. C. Gordinier and J. A. Barnes.

Dr. B. S. BOOTH presented a case of probable Rhino-Scleroma. The patient was examined by the members present and was discussed by Dr. F. K. Roarke.

Dr. H. C. GORDINIER reported eight cases of brain tumor: (a) Tumor of the Right Cerebellar Hemisphere and Median Lobe, probably compressing the corpora quadrigemina and right motor path in the pons, as well as the right abducens, facial, auditory and fifth nerves. (b) Tumor of the Choroid Plexus of the Fourth Ventricle, producing symptoms characteristic of a tumor of the median lobe of the cerebellum. (c) A Glioma of the Right Motor Area, destroying the leg center. (d) A Probable Intracranial Growth of the Left Motor Area. (e) Large Solitary Tubercles of the Cerebellum and Pons Varolli. (f) A Tumor of the Left Cerebellar Hemisphere and Worm, compressing the left side of the pons and medulla, the facial, auditory, glossopharyngeal and hypoglossal nerves. (g) Tumor of the Right Middle Fossæ, Destroying the Median and Inferior Surface of the Temporo-Sphenoidal Lobe and the White Matter of the Central Gyri and Insula. (h) Fibro-sarcoma of the Occipital Lobe of the left side. Dr. Gordinier's paper was discussed by Dr. E. D. Ferguson.

A motion to adjourn was seconded and carried.

J. W. MORRIS, *President*.

E. W. BECKER, *Secretary*.

## Medical News

Edited by Eugene E. Hinman, M. D.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR NOVEMBER, 1902. Number of new cases, 49. *Classification of cases*: dispensary cases receiving home care, 6; district cases reported by health physicians, 2; charity cases referred by other physicians, 19; total number of charity cases, 27. Moderate income patients, 22. Old cases still under treatment, 25. Total number of patients under nursing care, 74. *Classification of diseases*: (new cases) medical, 20; surgical, 2; gynæcological, 1; obstetrical, 21, (in general work of the Guild, 19; in Special Obstetrical Department, 2); dental, 4; throat and nose, 1; contagious diseases, 1; deaths, 5.

*Visits of Guild Nurses*: Number of visits with nursing treatment, 547; for professional supervision of convalescents, 202; total for the month, 749. Cases were reported to the Guild by the City Physician, by one health physician and by twenty-one other physicians; dentists, 2.

*Special Obstetrical Department*: The obstetrician in charge of cases. Medical students in attendance, 2; graduate nurses, 4; assistant nurse, 1; patients, 2. Number of visits by obstetrician, 11; by medical students, 10; by Guild nurses, 15; total number of visits for this department, 36.

RECEPTION AT DR. WARD'S HOME.—On Tuesday, December 9th, Dr. S. B. Ward tendered a reception to the Senior and Junior classes of the Albany Medical College. Dr. and Mrs. Ward and Miss Ward received the guests with a cordial welcome which put all present at their ease at once. A little later in the evening, after refreshments had been served, the guests and their host were pleased to listen to instructive and witty remarks from Governor Odell, President Raymond, Dr. Albert Vander Veer and others. After a round of college songs the pleasant evening was brought to a close.

HONOR LIST FOR CLASS OF 1903, A. M. C.—At a recent meeting of the class of 1903, the following commencement offices were filled: Valedictorian, Donald Boyd, Fonda, N. Y.; alternate valedictorian, Frank Keator, Accord, N. Y.; orator, Edwin F. Sibley, Bennington, Vt.; poet, A. I. Cullen, Watervliet, N. Y.; essayist, J. Howard Brannan, Albany, N. Y.

UNION COLLEGE ALUMNI ASSOCIATION OF NEW YORK CITY.—This association held its annual reunion and banquet on Thursday evening, December 11th, at the Hotel Manhattan. The reunion and business meeting was held early in the evening, after which dinner was served. The alumni associations of the medical and law colleges were represented around the table and all united in pronouncing the meeting the most successful in the history of the association. Many prominent men were included in the toast list, all of whom were listened to with pleasure.

**ELECTRICAL ENGINEERING AT UNION COLLEGE.**—The General Electric Company has offered a sufficient sum to thoroughly equip an electrical laboratory at the college and to pay annually for five years a certain sum for salaries, provided the friends of the college provide another sum for the same purpose. The company has also consented to allow Mr. C. P. Steinmetz, an electrical expert, to take complete oversight of the course of instruction in electricity. The college authorities have accepted these offers and have appointed Mr. Steinmetz professor of electrical engineering in the institution.

**CONFERENCE OF SANITARY OFFICERS.**—The Second Annual Conference of Sanitary Officers was held in Albany, October 30 and 31, and was in every way successful and satisfactory to the State Department of Health, under whose direction it was projected, likewise to all who attended it. The meeting was favored by the presence of the secretaries of the State Health Boards of Minnesota and Michigan, Drs. Bracken and Baker, and of Dr. P. H. Bryce, of the Province of Ontario. Among the papers presented and discussed were the following: "The Legal Aspects of the Work of Health Officers," by Deputy Attorney-General E. D. Warner; "The Ethical Value of Education in Preventive Medicine," by Dr. Peter H. Bryce; "Antitoxin in Diphtheria and Tetanus," by Dr. Herbert D. Pease; "The Use and Abuse of Food Preservatives," by Dr. Willis G. Tucker; "The Technique of Vaccination," by Dr. F. C. Curtis.

**ADULTERANTS AND PRESERVATIVES IN FOODS.**—In order to ascertain how injurious to health is the addition of boric acid as a preservative, as well as adulterations, twelve young men are being fed a ten day course of food preserved in boric acid under the direction of the Agricultural Department at Washington. Professor Wiley, of that Department, is an expert in such matters, as well as an expert cook, and he has personal supervision of both the tests and the cooking. After observing the effects of this preservative, other tests of the many adulterations of food stuffs will be carefully made in the same manner. If the youths survive the boric acid test they will be asked to dine on sulphide of potash, aniline dyes, salts of copper, salicylic and benzoic acids. The *Medical Times* states that the employment of boric acid for the preservation of food has been prohibited by the German government. This action was in consequence of a series of tests made by officers of the Imperial Bureau of Public Health, the details of which investigation were worked out with the greatest accuracy possible. It was found that boric acid is eliminated very slowly from the body, and even after a single dose traces of the drug can still be found eight days later in the secretions. Hence it rapidly accumulates in the system, so that even small daily doses taken for a few days may produce serious results, more especially in the case of children.

**FOOT AND MOUTH DISEASE.**—Although not of great importance to the medical profession as a disease of the human species, this disease is attracting the attention of health boards because of its increasing prevalence, and, being a highly contagious malady, is endangering our food products. The



disease is peculiar to ruminating animals, but is occasionally transmitted to man. It is characterized by a vesicular eruption in the mouth and on the feet, which after a little time becomes ulcerated. Lameness and debility speedily follow and complications of the internal organs are common. The government is doing all in their power, by destruction of herds and strict quarantine, to stamp it out before it becomes epidemic.

**TUBERCULOSIS CONGRESS.**—At the recent meeting of the Tuberculosis Congress, held in Berlin, the subject of the transmission of this disease from animals to the human species, or *vice versa*, was very thoroughly discussed by the foremost investigators of this country and Europe. Dr. Koch stated that he was as firmly convinced as ever that it was not transmittable from animals to man, and that he was now at work on a number of experiments, but had not found anything to show that his position was not correct. Among those who reported from America were Drs. de Schweinitz, Dorset and Schröder, who stated that several positive cases in which they were interested proved beyond a doubt that the disease was capable of being transmitted from man to animals. The Imperial Health Office of Berlin has issued the following statistics: regarding the mortality of phthisis in Europe: Russia has more than 4,000 deaths per 1,000,000; Austria-Hungary and France more than 3,000 per 1,000,000 population; Sweden, Germany, Switzerland and Ireland more than 2,000 per 1,000,000 population; Netherlands, Italy, Belgium, Norway, Scotland and England more than 1,000 deaths per 1,000,000 population.

**PAN-AMERICAN SANITARY CONGRESS.**—On December 2nd representatives from the various Pan-American countries met in the city of Washington to discuss some practical plan for the prevention and suppression of yellow fever and other contagious diseases in sea-ports. Surgeon-General Wyman, of the United States Public Health and Marine Hospital Service, was delegate from the United States and was a leading factor in its inauguration.

**A NEW WORK ON ELECTRO-DIAGNOSIS.**—Dr. J. M. Mosher, of Albany, has in preparation a work devoted to the subject of Electro-Diagnosis. The object of the work is to teach the action of nerves and muscles in their relation to anatomy, in neurological diagnosis and treatment, as well as such surgical cases as demand muscle transplantation or treatment for injuries to muscles or nerves.

**PERSONAL.**—Dr. HARRIS MOAK, (A. M. C., '99), has removed to Brooklyn, N. Y., where he will open his offices on January 1st, at the corner of Prospect Place and Underhill Avenue.

—Dr. J. H. DINGMAN, (A. M. C., '01), has started in practice in Madeline, N. Y.

—Dr. W. J. CAVANAUGH, (A. M. C., '99), has been transferred from Willard State Hospital to Hudson River State Hospital, where he is acting as junior assistant.

**MARRIED.**—At Troy, N. Y., on October 29th, Dr. J. H. FLYNN, (A. M. C., '99), and Miss MARGARET M. HOGAN.

## Book Reviews

*A System of Physiologic Therapeutics.* A Practical Exposition of the Methods, other than Drugging, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College; Physician to the Philadelphia Hospital and to the Rush Hospital for Consumption, etc. Volume IX. *Hydrotherapy, Thermotherapy, Heliotherapy, and Phototherapy.* By Dr. WILLIAM WINTERNITZ, Professor of Clinical Medicine in the University of Vienna; Director of the General Polyclinic in Vienna; Assisted by Dr. ALOIS STRASSER, Instructor in Clinical Medicine at the University of Vienna, and Dr. B. BUXBAUM, Chief Physician of the Hydrotherapeutic Institute in Vienna; and *Balneology and Crouno-therapy*, By Dr. E. HEINRICH KISCH, Professor in the University of Prague; Physician at Marienbad Spa. Translated by AUGUSTUS A. ESHNER, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic, etc., and with *Notes on American Springs* by GUY HINSDALE, A. M., M. D., including *Special Chapters on the Classification of Mineral Waters and their Distribution in the United States*, by A. C. PEALE, M. D., Aid in the National Museum, Washington, D. C., in Charge of Mineral Water Statistics of the United States Geological Survey; On the *Practice of Phototherapy and Thermotherapy*, by J. H. KELLOGG, M. D., of Battle Creek, Michigan; and on *Saline Irrigation and Infusions*, by HARVEY CUSHING, M. D., of Johns Hopkins Hospital, Baltimore; also an Appendix by The Editor. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1902.

This volume contains a great deal of valuable information which is made available by a complete index. Descriptions of the health resorts of America and Europe and their uses will be appreciated by all practicing physicians who frequently need this information in definite shape; and this may also be said of the therapy of light in all its forms. Drinking cures, to which has been given the name "crounotherapy," to distinguish it from "balneotherapy," has been given special attention. Finsen's method of heliotherapy is described in detail, and the different procedures in the use of heat and cold, either wet or dry, are outlined plainly for practical purposes.

The information thus given has not been collected before in any other work, and much of it is not in print. As a synopsis of important methods needed in every-day work the volume should be at the hand of every practitioner.

*The Mattison Method in Morphinism.* A Modern and Humane Treatment of the Morphin Disease. By J. B. MATTISON, M. D., Medical Director, Brooklyn Home for Narcotic Inebriates. Published for the Author. E. B. Treat & Company, New York, 1902. Price One Dollar.

This is a duodecimo monograph of forty pages upon the use of large doses of sodium bromide in substitution for opium during its

rapid withdrawal. The author also details the further treatment used in his home for Narcotic Inebriates, including medicines and diet and moral management.

The description of his method of bromide substitution is clear and concise, and of value, but the text throughout is marred by queer phrases and words not ordinarily current where proper English is spoken or written. Among these may be mentioned "sub-dermic," "the insomnia sequeling a long-use-opiate quitting," "alvine torpor," "neck-nape," "roberant regime," "digestive disaster," "post-poppy soporific," "belly pain."

*Transactions of the Medical Society of the State of New York for the Year 1902.* Published by the Society, 1902.

The volume of Transactions of the State Society for 1902 contains more papers than usual, as those read at the semi-annual meeting held in New York in October, 1901, are included. The additional space required has been gained without materially increasing the size of the volume by omitting the names of the members of the county societies. Besides the anniversary address of Dr. Henry L. Elsner, and the Merritt H. Cash prize essay by Dr. Lucien Howe, there are sixty-two papers covering a wide range of subjects and including many of great worth. The symposium occupies a prominent place, as there are three of them and there are many well-known names among the writers of the papers of which they are composed. In the symposium on diseases of the pancreas are included four papers, in that on diseases of the liver there are six, and in one on general paralysis are four which consider the various aspects of these diseases in an exhaustive manner.

R. G. C.

*Psychopathological Researches.* Studies in Mental Dissociation with Text-Figures and Ten Plates. By BORIS SIDIS, M. A., Ph. D., Director of the Psychopathological Laboratory. Published under the Auspices of the Trustees of the Psychopathic Hospital, Department of the New York Infirmary for Women and Children. New York, G. E. Stechert, London, Leipsic, Paris, 1902.

This book consists mainly of the records of cases of some of the functional psychoses studied by psychopathological methods which have been developed by the writers and their associates in this line of work. The book is really written by three men, though this fact does not appear on the title page, Boris Sidis, M. A., Ph. D., William A. White, M. D., and George M. Parker, M. D. Besides the introduction, which is written by Boris Sidis, there are in the volume eight articles, the first being "Some General Remarks Concerning Psychopathological Research," by Boris Sidis, while the other seven constitute the researches in mental dissociation. Of these studies one is written by Dr. Sidis, one by Dr. Sidis and Dr. White, one by Dr. Sidis and Dr. Parker, and two are contributed by Dr. White, and two by Dr. Parker.

In the introduction it is stated that each of the cases described is typical of many others investigated and that theories and principles have been avoided as much as possible, as the object of this book is to give a resumé of the facts and experiments.

In "Some General Remarks Concerning Psychopathological Research" Boris Sidis states that in the study of psychosis he prefers to follow the direct or internal method rather than the indirect or external; and explains that the functional psychic diseases are best for such investigation, as they show the early stages of psycho-motor modifications and present material which can be controlled and manipulated. He defends the subjective method of investigating psychical phenomena, as the phenomena are themselves subjective and can only be studied by the use of psychological introspection. Advanced cases of mental dissolution are not good material, therefore, as the patient must have intelligence enough to give a correct introspective account of his experiences. He admits that the study of the early stages of functional psychosis (hysteria) is difficult because of the danger that the patient may be shamming, but justly claims that this is no reason for giving up the investigation of the subject, but he does not add much to the force of his contention by claiming that it is as possible that the insane are feigning their subjective symptoms, their delusions and hallucinations, or that organic aphasia and apraxia may be simulated.

In "Mental Dissociation in Functional Psychosis" Boris Sidis and Dr. William A. White present the results of their study of a case of severe hysteria in a girl of thirteen. In this case the possibility of deception on the part of the patient will frequently occur to the reader and it will be necessary to have some of the most important findings confirmed in other cases before general conclusions can be formulated. It can hardly be considered as established that stimuli were perceived by the subconsciousness dissociated from the upper consciousness because of the results obtained by the method of associative suggestion in this case.

In "Mental Dissociation in Alcoholic Amnesia" Dr. White reports an interesting case which is important from a medico-legal as well as a psychological point of view. In this patient there was complete loss of memory for a period of three hours due to the excessive use of liquor, but during this time he returned a team of horses to a livery stable and did other involved acts. In a state of "hypnoidization" some of the events which occurred during this period could be remembered.

In "Mental Dissociation in Psychic Epilepsy" Dr. White gives the history of a girl of fourteen with an analysis of the development of the symptoms and their exciting causes. Our classification of diseases is not yet satisfactory if this case must be called one of psychic epilepsy, though there is a close relationship to this disease. Dr. White's statement that the condition is really that of "mental dissociation with disunited systems in the depths of the subconscious" may be more satisfactory, but is not in accord with present methods of classification. The patient's recovery under hypnotic treatment shows that she was suffering from hysteria, and not epilepsy.

There are two articles on "Mental Dissociation in Depressive Delusional



States," but the same patient is studied in both, in the first by Boris Sidis and in the second by Boris Sidis and Dr. George M. Parker. The patient, who had melancholia with a systematized delusion, showed two entirely new personalities under hypnosis, one gay, and the other grave but contented though the delusion, which caused depression when not under hypnosis, was retained in both these states. A triple personality was shown which corresponds to the three emotional states in circular insanity. Under hypnotic treatment a state of happiness was gradually substituted for the depression and the delusion was gradually eliminated by changing lumps which the patient believed were in him into spots and limiting these to a small area. The second paper gives the experimental data and shows that the depression began in February, 1900, and that in the following October the delusion was not entirely gone, but the date of complete recovery is not given. From a medical point of view it would be more satisfactory to know the duration of the disease under this line of treatment and whether anything was done to improve the patient's physical condition.

Dr. George M. Parker contributes two articles, in the first of which he describes a case of hysterical joint in a woman of twenty-five who did not fully recover under hypnotic treatment. In the second article entitled "Mental Dissociation in Psychomotor Epilepsy," he describes one of the most interesting cases in the book, as the patient had attacks resembling petit-mal, though the first one occurred when he was thirty-three and followed a period of hard drinking. The habit of recurrence became established and there were as many as one or two attacks a day before the patient came under observation. Mental changes were present, loss of memory, dullness, confusion and irritability. He had no memory of the attacks until he was hypnotized, when he could recall what happened during them and in some instances his account could be corroborated by witnesses. Later hypnoidization was substituted for hypnosis, and it was found that he could remember incidents of his attacks by the use of this method and finally the dissociation seemed to be overcome, his mental condition improved and the attacks ceased.

The book as a whole is interesting and suggestive and the studies of cases under hypnosis and by hypnoidization show the value of these methods in investigation, though they do not prove that they are superior to other plans of treating the psychoses. From a medical point of view the most valuable facts brought forward by these researches are probably the recollection during hypnosis and hypnoidization of occurrences during periods of which there had been complete amnesia, especially in the case of acute alcoholism and in those resembling epilepsy, and the production, also by hypnosis, of a triple personality. The neurone theory certainly accounts in a satisfactory way for the phenomena of the functional psychoses and of hypnotism and is, of course, essential to the theory of dissociation presented in this book.

R. G. C.

*The Physicians' Visiting List* (Lindsay & Blakiston's) for 1903. P. Blakiston's Son & Co., Philadelphia. Price \$1.00.

This complete but compact visiting list, in the fifty-second year of its publication, is of the same high standard as the previous editions.

## Current Medical Literature

## MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

*Concerning the Diazo Reaction, Especially its Occurrence in Pulmonary Tuberculosis. (Ueber die Diazoreaktion, besonders ihr Auftreten bei der Lungentuberkulose.)*

AXEL BLAD and PAUL VIDEBECK. *Zeitschrift für Tuberkulose und Heilstättenwesen, Band 2, Heft 5 and 6, 1901.*

In this article Blad and Videbeck carefully review the literature on the diazo reaction and its relation to various diseases, and make a special study of some of the fallacies connected with the test, and of its relation to pulmonary tuberculosis. With Ehrlich they recognize three types of the reaction, the primary reaction in which a slight reddish-yellow color appears on mixing the urine with the sulfanilic acid and nitrate mixture without the addition of an alkali—the secondary reaction in which a red color of varying intensity appears upon the further addition of ammonia, and a tertiary reaction, in which there appears on standing a dark colored sediment of phosphates. The authors recommend a slight change in the formulæ for the different mixtures. Their solution A consists of

Sulfanilic acid, 1.25 grams.

Diluted hydrochloric acid, 12.5 grams.

Distilled water, 250 grams.

Their solution B consists of

Sodium nitrate, 25 grams.

Distilled water, 50 grams.

They point out that Solution A keeps indefinitely, whereas Solution B is not good longer than one week. Furthermore, a good many of the samples of nitrate of soda ordinarily supplied are inert, and the authors suggest that the sample should always be tested by adding one or two crystals to a weak solution of permanganate of potash, which should be decolorized. For making the test they mix 98 parts of Solution A with two parts of Solution B. The mixture is serviceable for one day only. The application of the test is the same as Ehrlich's original method.

The authors studied particularly the relation of the reaction to the administration of certain drugs, and found that in the case of some drugs a pseudo-reaction was obtained. Some cathartics, as magnesia and rhubarb powder, and compound licorice powder, at times produce an apparent reaction. In patients who have been taking large doses of salipyrin, salol, and quinine, the reaction was reserved at times. Frangula also produced a beautiful reaction in some cases. Acetate of morphine likewise led to a reaction, a fact which had been observed before by Hewlett.

The authors suggest that in cases where the secondary reaction is present, but there is doubt as to the possible action of drugs, that the urine be allowed to sediment until the tertiary reaction appears.

The authors conclude by giving a table which shows the incidence and significance of the diazo reaction in tuberculous patients. Briefly stated the results seem to show that in mild cases of tuberculosis with

a tendency to recovery the diazo reaction is usually absent, or very slight. In more advanced cases, however, especially those which tend to end fatally, the reaction is usually marked. The reaction can therefore be depended upon according to these authors as a prognostic sign. Its constant presence indicates a grave prognosis.

*Tuberculosis and Diseases of the Heart from the Therapeutic Point of View. (Tuberculose und Herzkrankheiten unter therapeutischen Gesichtspunkten).*

ACHERT. *Zeitschrift für diätetische und physikalische Therapie, 1901-1902. Band V.*

Rokitansky taught that all diseases of the heart which induced pulmonary stasis prevented pulmonary tuberculosis. For a long time this axiom of the Viennese school was everywhere accepted but recently by statistics it has been brought into question. Frommolt from records of the Dresden hospital shows that 8 per cent. of the cases with valvular disease also had pulmonary tuberculosis. Peter, Fränzel and Kidd have also shown the same frequency.

In all these investigations, however, it is rare to find the engrafting of a fresh tuberculosis upon an old endocarditis. It is therefore not the endocarditis but the hyperæmia of the lungs which induces a certain protection against tuberculosis.

Brehmer lays stress upon the smallness of the heart in tuberculosis. This is not a condition of atrophy, but rather a true hypoplasia and is an important element in the predisposition.

Bencke also found that, on the average, cases of tuberculosis had smaller hearts than normal. He discovered too that the arteries were relatively small.

There are therefore several factors which coincide to diminish the circulation in the apices.

The conclusion is that the best treatment of tuberculosis is to overcome the pathological weakness of the heart. The characteristic of high altitudes consist especially in the diminution of air pressure, as a result of which there is an increase of cardiac activity, pulse frequency, and tissue metamorphosis.

Mountaineers on account of their climbing have a strong, at times even a hypertrophied heart.

The taking of baths, gymnastic exercises, food rich in fats, milk and a moderate quantity of alcohol should be recommended.

The chronic tuberculosis is in the first stage always curable, as there are always means to strengthen a small, weak heart, and thus to modify or cure tuberculosis.

*Concerning the Coincidence of Valvular Heart Disease and Pulmonary Tuberculosis. (Ueber das gleichzeitige Vorkommen von Herzklappenfehlern und Lungenschwindsucht.)*

MEISENBURG. *Zeitschrift für Tuberculose, Bd. 3, Heft. 5, 1902.*

Meisenburg reviews and critically analyzes the figures of previous observers on the coincidence of consumption and heart disease up to the



present.\* He considers the figures on the whole unsatisfactory because many of them cover too small a number of cases, and most of them take little or no account of the clinical side of the question.

The author analyzes 43,365 cases with regard to the relations between valvular disease and pulmonary tuberculosis. Among the 43,365 cases there were 4,649 with pulmonary tuberculosis, of which number one and fourteen-hundredths per cent. also had valvular disease. There were 760 cases of valvular heart disease of which seven per cent. also had pulmonary tuberculosis. Of the patients with mitral disease nine and three-tenths per cent had pulmonary tuberculosis. Cases of pure mitral insufficiency showed sixteen per cent. with tuberculosis, while on the other hand cases of pure mitral stenosis showed only two and six-tenths per cent. with the disease. The aortic valve lesions were less frequently associated with consumption, in pure aortic insufficiency five and twenty-six hundredths per cent. of cases had pulmonary tuberculosis, with pure stenosis eleven and seven-tenths per cent., with both lesions two and eight-tenths per cent. Four out of five cases of pulmonary stenosis had tuberculous lesions in the lungs. Pulmonary tuberculosis was rare in cases with chronic endocarditis implicating many valves.

The frequency of tuberculosis with mitral insufficiency the author lays to the fact that this lesion is essentially a heart lesion of youth when tuberculosis is most common. On the contrary aortic valve lesions occur after middle age as a rule, and are less frequently accompanied by tuberculosis. The well-known relation between pulmonary stenosis and tuberculosis of the lungs is again alluded to and explained by the deficient blood supply to these organs. Why mitral stenosis should be so infrequently associated with pulmonary tuberculosis the author does not explain satisfactorily. He seems to lay most stress on chemical changes in the blood as being the preventive agent.

He refers finally to Bier's surgical work and seems to think that pulmonary stasis plays an important part in inhibiting invasion by tubercle bacilli in the lesions mentioned, pulmonary stenosis excluded.

*Concerning Tuberculous Infection through the Alimentary Canal.*  
(*Ueber die Tuberculosis-Infection durch den Verdauungskanal.*)

HELLER. *Deutsche medicinische Wochenschrift*, No. 39, 1902.

The question of the frequency of primary tuberculous infection through the alimentary canal, has attained importance since Koch raised the question as to the identity or non-identity of human and bovine tuberculosis. The decision of the question of the transferability of tuberculosis from man to cattle in the affirmative, has not by any means settled the point that the reverse is true. Koch has given as an example against the identity of the bacilli, the great rarity of a primary intestinal tuberculosis in man. The author has pointed out the fact, that statistics collected as a result of autopsies on tuberculous subjects, are of little value, because in cases of advanced tuberculosis it is impossible to determine the place of origin of the tuberculous process.

The author has shown how frequently, particularly in childhood, the infection starts in the alimentary canal. Other careful observers have



arrived at the same conclusions. Councilman, Mallory and Pearce, accidentally discovered in 220 cases of diphtheria, tuberculosis processes. Their statistics, together with the author's and those of Baginsky, are as follows: *Author's*, (Kiel).—Diphtheria cases, 714; cases of tuberculosis among them, 140 or 19.6 per cent. of the cases of diphtheria. Among these there were 53 cases of tuberculosis of the digestive organs, or 7.4 per cent. of the diphtheria cases and 37.8 per cent. of the tuberculous cases. *Boston*.—Diphtheria cases, 220; among these there were 35 cases of tuberculosis, or 16 per cent. of the diphtheria cases. Among the cases there were 13 of tuberculosis originating in the alimentary canal, or 5.9 per cent. of the diphtheria cases, and 37.1 per cent. of all the tuberculous cases. *Baginsky*.—Diphtheria cases, 806; among them 144 cases of tuberculosis or 17.8 per cent. of the diphtheria cases. There were 6 cases of tuberculosis starting in the alimentary canal, or 0.7 per cent. of the diphtheria cases, and 4.1 per cent. of the tuberculous cases. The remarkable similarity in the Boston and Kiel statistics, prove in the author's opinion the accuracy of the observations.

The author during the past few months has observed further cases of primary infection through the alimentary canal. The following case is briefly cited as an example: A boy, aged 13 years, was sent from the medical clinic to be autopsied, with the diagnosis of intestinal tuberculosis. The autopsy resulted in the following findings: enormous tuberculous ulcers of the small intestines, and a large tuberculous ulcer of the cæcum. Swelling of the mesenteric glands, with gray and cheesy nodules. Military tubercles of the liver. Extensive amyloid degeneration of the spleen, with slight degeneration of the kidneys. No evidence of tuberculosis in any other part of the body. Tubercle bacilli were found in the mesenteric glands. A personal investigation at the boy's home showed that both parents were healthy, and the grandfather, aged 70 years, is perfectly well. Tuberculosis was quite extensively distributed among the cows. In conclusion the author states, that neither from the above case nor statistics, can any positive deductions be drawn, but they prove that the question is not by any means absolutely settled.

*Alimentary Intoxications Produced by Fish. (Les Intoxications Alimentaires Produites par les Poissons.)*

G. VIGNON. *Gazette des Hopitaux*, No. 102, 1902.

In this article Vignon summarizes our knowledge of fish poisoning. Fish poisoning may be due to certain varieties of fish even in a fresh state, for forms are found whose internal organs and eggs are poisonous to man. Most of these fish, however, are found in the Orient, especially about Japan, and cases of fish poisoning observed in temperate climates are due either to the ingestion of fish diseased when they were caught, or more to the eating of fish, either fresh or canned, which had partly decomposed before it was eaten.

There are three main types of fish intoxication, the gastro-enteric, the nervous and the exanthemic. The last form is so rare that it is only necessary to mention it, the other two are the common forms.

The gastro-intestinal form is the most frequent. It presents various degrees of gravity. In the mildest cases the fish merely acts as a purge. In more severe cases there is gastric pain, general malaise, nausea, vomiting and diarrhoea with colicky pains. In the most severe cases the symptoms resemble adynamic typhoid or cholera. There is a short period of incubation, in some cases only fifteen minutes, followed by violent headache, burning sensation along the oesophagus and in the epigastrium, nausea, and bilious or sanguinolent vomiting. The abdomen may or may not be distended. The face is pale, the skin is covered by a clammy sweat, the urine is almost suppressed, and often death occurs.

In the nervous form the gastro-intestinal symptoms are slight, and there is an incubation period of one or two days. Then slight gastro-intestinal symptoms without fever occur. Vertigo, dimness of vision and cranial paralyses occur. Ocular paralyses are almost constant. Pneumogastric paralysis may occur.

The poisoning in all cases is due to ptomaines, especially the so-called ptomato-atrophine. Possibly a specific bacillus is concerned in their production, but it has not yet been discovered.

The treatment consists in evacuation of the stomach and intestines, aid to the other eliminative organs, and treatment of the prostration of a general supportive character.

## NEUROLOGY

Edited by Henry Hun, M. D.

*The Theory of Hemiplegic Contractures. (Ueber die Theorie der hemiplegischen Kontraktur.)*

MANN. *Zeitschrift für diätetische und physikalische Therapie*, 1902, Band V, Heft VIII.

The writer combats the explanation of Lazarus that there is synchronously a weakening of the motor innervation and an absence of the inhibitory action from the cortex resulting in a hypertonic condition which manifests itself by contracture.

The clinical manifestations of this hypertonic condition according to Lazarus are the increased tendon reflexes and the mechanical and electrical irritability which are present in all paretic muscles. That the separate muscles are affected in different degrees is due to the fact that physiologically they possess different strength, as, for example, the flexors of the fingers are stronger than the extensors, as a result the weaker muscles show relatively greater loss in strength. The tone of the muscle varies with the physiological conditions. The contracture takes place in those muscles which relatively are stronger in power and tone. The more marked the paresis the more pronounced the contracture. By complete destruction of the internal capsule there is total paralysis and the most severe grade of hemiplegic contracture. This explanation which seems reasonable and simple, cannot explain, however, certain facts. It is certainly not correct that the severest grade of contracture is seen in total section of the motor tract. In fact in these cases the paralysis is always absolutely flaccid as in transverse section of the cord or in hemiplegia

where the paralysis is total and permanent. The most marked contractures are seen in those cases in which the motor tract is partly intact.

The presence or absence of contractures is determined by the resistance to passive motion. The increase of the mechanical and electrical irritability as well as that of the tendon reflexes is not always indicative. The first is often absent and the latter is usually parallel with the hypertonicity. In fact it has been determined that the condition of the reflexes and the muscular tone do not always coincide. When a typical hemiplegic leg is moved at the knee there is marked resistance to flexion, while extension is very easy. The same is true at the ankle where dorsal flexion is difficult and plantar flexion is easy. Actively the patient strongly extends the leg and dorsally flexes the foot, while the opposite movements are markedly paretic. The paresis of a muscle group is associated with a hypertonicity of their antagonists. The probable explanation is that the motor impulse for a group of muscles passes in the pyramidal tract with the inhibitory impulse for their antagonists. If then the motor impulse is destroyed, then the inhibitory action upon the antagonists is lost.

The explanation that the differences in the paretic muscles are simply the physiological differences is hardly sufficient to explain the marked difference in power between antagonistic muscles. It is therefore not an increase of the normal difference of strength but that certain muscles are especially affected by the paralysis. Wernicke has called these the muscles of predilection. It would seem probable that the tracts for certain movements are more favorably situated in the pyramidal tracts than are their antagonists. It is also possible that the motor impulses are in a narrow area while the inhibitory for the antagonistic muscles are diffused over the entire motor tract. A slight lesion therefore might cause a total paralysis and yet only partially affect the inhibition of the antagonistic muscles.

*The Corneo-Mandibular Reflex. (Der Corneo-mandibularreflex.)*

F. VON SÖLDER. *Neurologisches Centralblatt*, 1902, No. 3.

This reflex consists of a fugitive movement of the lower jaw, which follows irritation of the cornea, the movement being toward the side irritated. The area of irritation is sharply limited to the cornea, so that the reflex under normal conditions is invariably accompanied by the corneal reflex. In order that the movement may be clearly seen, it is necessary that the mouth be held slightly opened, and the under lip partially drawn away from the teeth. The reflex movement is a transverse action of the lower jaw, not associated with opening or closing of the mouth, that is, a contraction of the pterygoids upon the side upon which the cornea is irritated. The reflex is generally slow, and very seldom a quick muscular contraction. By repetition of the irritation the reflex is repeated, but diminishes gradually after two or three repetitions, though it may be observed again after a short pause.

The explanation of the corneo-manibular reflex is that it is confined to the trigeminal nerve, inasmuch as both the cornea and the pterygoid are innervated by its branches.

As to the pathological importance of this reflex the author can say little. It is naturally found under normal conditions, and its absence might be of value in differentiating a pontine lesion affecting the nuclei of the fifth nerve. He has found it to persist after the corneal reflex had disappeared in comatose conditions, as multiple carcinomatous metastases of the brain, embolic softening in acute delirium, luetic foci of softening in the pons, and epileptic coma. In a number of cases of chloroform and ether narcosis this reflex was present only twice, and then just before the return of consciousness.

*Spastic and Syphilitic Spinal Paralysis.*

WILHELM ERB. *The Lancet*, October 11, 1902.

Dr. Erb devoted the opening lecture at the Post-Graduate College, West London Hospital, to a consideration of the disease of the lateral columns of the cord which bears his name. He stated that since his first description of lateral sclerosis in 1875 he had had opportunity to verify the facts stated at that time, and that although there had been many questions as to the separate identity of this condition he felt assured of his symptom complex as representing a definite lesion limited to the lateral columns. The complaint is a rare one, much less common than tabes. It usually begins slowly and insidiously, rarely in a more acute fashion, with some sense of weight, dragging and slight feebleness in one or the other leg, without pain, or at most only pain or fatigue after prolonged exertion, without, or with only slight, transient paræsthesia of the legs, and without any other symptoms, except, perhaps, some backache. The condition progresses just as slowly as it commenced; the legs become stiffer and heavier, the gait progressively more labored, dragging, and distinctly spastic; occasional muscular cramps and contraction of the legs may occur, but nothing else. Objective examination reveals, after the disease has existed for some months, or even years, the characteristic symptom triad: a certain weakness and awkwardness of movement of the legs, very slight, so that often nothing in the way of paresis, much less paralysis, is present; no ataxy—but far more distinct and prominent are the spasm and rigidity of the muscles, ranging from slight elastic resistance during passive movement to marked, stiff contracture temporarily increased by energetic muscular action, necessitating forced extension of the legs, etc.; and thirdly, the well-marked exaggeration of the tendon reflexes (patellar clonus, ankle clonus, reflexes from periosteum and fasciæ and numerous tendons which normally scarcely yield any reflex), with voluntary clonus of the foot (spinal epilepsy) while the patient is sitting. To these must be added the pathological plantar reflex (show dorsiflexion of the great toe when the sole is slightly stroked—valuable evidence of organic changes in the pyramidal tracts) recently described by Babinski.

The disease progresses as slowly as it began—endlessly for years and decades. It is not directly fatal, generally speaking, and there are less pain and suffering than in many spinal affections.

In 1892 Erb differentiated syphilitic spinal paralysis. This is characterized by this, that besides the typical picture of spastic spinal paralysis, there



are always a disturbance in bladder function and usually a slight, but always demonstrable subjective and objective disturbance of sensation. In the cases examined post-mortem, lesions have been found in various fibre systems of the spinal cord—a combined system disease—chiefly in the posterior half of the lateral tracts and the tracts of Gowers, the direct cerebellar tracts, the tracts of Goll, and partly also in the postero-lateral tracts (Burdach's tracts).

*Certain Anomalous Forms of Tabes Dorsalis.*

JAMES TAYLOR. *British Medical Journal*, July 19, 1902.

In discussing anomalous forms of this disease, Taylor, for illustrative purposes, regarded as a group those cases in which symptoms referable to the eye were the chief manifestations. A large number of these patients consult an ophthalmic surgeon in the first instance, chiefly on account of paralysis of one or other of the ocular muscles, or on account of atrophy. In his experience the muscle most commonly affected is the levator palpebræ; but along with this it is usual to find defect in certain of other muscles supplied by the same nerve. Ptosis alone, without any other ocular defect, is rare if unilateral; but a slight, though quite definite, degree of double ptosis is by no means uncommon in cases of tabes without any involvement of any other muscle. Besides this affection of the third nerve, and indeed sometimes apart from it, we sometimes meet with paralysis of either one or both sixth nerves, most frequently of one. And it may be said generally of these ocular palsies, occurring in tabes, that the paralysis is nearly always of a transient character, clearing up in a few weeks' time, usually under the influence of iodine and mercury, although such paralysees sometimes disappear when neither drug is being taken. It may be asked, Are such cases always definitely tabetic? Occasionally perhaps not, but in the great majority of cases at all events they are, for they have as a rule, associated with the symptoms above described, either pupils which are inactive to light, or lightning pains, not uncommonly in the distribution of the fifth cranial nerve, or girdle sensation, or loss of knee-jerk; perhaps all of these. Yet even in such cases the ocular paralysis may be no necessary part of the tabes. In some cases undoubtedly the knee-jerks are still present, and the pain in the head is nothing more than might be accounted for without invoking the idea of lightning pains; but even such cases Taylor believes are tabetic, and he has known several instances in which true tabetic symptoms, in abeyance at first, were afterwards fully developed.

The same may be said of cases which seek advice first on account of defective vision. The defect of vision is almost invariably the result of optic atrophy—the grey atrophy which is by far the most common form of atrophy met with in tabes. If we see such a case in the early stage there may be only a slight degree of optic atrophy, with a corresponding defect of vision present. No other symptom, not even loss of knee-jerk, is to be found, although a few months later it is not uncommon to find that the knee-jerk has disappeared, and that the patient is having occasional attacks of shooting pains, not very severe, either in the arms or in the

legs, or in both. Not at all infrequently the Argyll-Robertson pupil is present in those cases, but Taylor has been rather struck with the considerable proportion of cases of what afterwards proves to be tabes in which optic atrophy is present, which have no Argyll-Robertson pupil, and in which the pupil remains responsive to light, even when vision is almost destroyed.

There remains still to be mentioned a third class of cases in reference to ocular symptoms, that class, namely, in which the Argyll-Robertson pupil may be the only sign of really definite importance. Every now and then a patient may present himself in whom the Argyll-Robertson pupil is present in both eyes, associated usually with a slight inequality in the size of the pupils, but in whom there may be no other sign of tabes. Such cases in Taylor's judgment, are nearly always of the tabetic type, and sooner or later they do develop some unequivocal sign of degeneration corresponding to the disease.

It is not infrequently stated that the onset of optic atrophy in a tabetic patient is followed by an arrest of the progress of the disease. This is a dictum which should be accepted with a certain amount of reserve. If this statement is intended to imply that optic atrophy in a tabetic patient prevents the onset of ataxy, then Taylor cannot accept it as true; he has, for example, known a patient who has been blind for some years as a result of tabetic atrophy developed very marked ataxy. Such an experience is undoubtedly rare. On the other hand it is no doubt the case that in most tabetics, who have optic atrophy, ataxy is not present, and this is especially true of cases in which failure of vision from optic atrophy is an early symptom; but in cases in which other symptoms of tabes were quite marked, and atrophy only came on subsequently, the onset of optic atrophy has no modifying effect upon the symptoms of the disease. Yet it is no doubt true, as a general rule, that in tabetic patients with optic atrophy, especially if this is very severe and the affection of vision very profound, the other usual symptoms of the disease—especially the ataxy—are either not present or are present in a very mild form.

## BACTERIOLOGY AND HYGIENE

Edited by A. J. Lartigau, M. D.

*The Fate of Diphtheria Bacilli in the Alimentary Tract and the Factors Involved.* A. Das *Schicksal der Diphtheriebacillen im Verdauungscanale und die dasselbe bestimmenden Factoren.*)

SÜSSWEIN *Wiener klinische Wochenschrift*, No. 6, 1902.

Klebs-Loeffler bacilli have been found in the lungs, liver, spleen, cerebrospinal fluid, blood, gall and urine. Heretofore nothing has been written as to the destiny of diphtheria bacilli in the stomach and intestines. Cases of so-called stomach diphtheria have been observed where the mucous membrane of the stomach has been covered with a membrane. Out of one hundred and forty-six autopsies at the Anna Kinderspital of fatal diphtheria there were four instances of stomach diphtheria. Since the inauguration of serum therapy in eighteen hundred ninety-four there has been but one case. Diphtheria bacilli must be continually swallowed in every case

of true diphtheria and the writer undertook to find out what became of them. He examined the stomach and intestinal contents in eight fatal and in fifteen living cases. In four of the fatal cases he was able to detect Klebs-Loeffler bacilli on cover glass smears from the stomach contents, but was only able to cultivate them in two cases. He was unable to detect the bacilli either in the stomach or intestinal contents of any of the living cases. The author then made a number of experiments the technique of which he carefully describes to ascertain whether this is due to the action of the gastric secretions, the bile, the intestinal secretions or the antagonistic action of the coli bacilli. He found that not only the free hydrochloric acid, but also the combined acidity of the stomach juices, exerted a bactericidal effect on the Klebs-Loeffler bacilli. Frequently hæmorrhagic erosions of the gastric mucous membrane occur and form excellent soil for the development of the diphtheria bacilli when there is a diminished acidity of the stomach contents. In this way the cases of stomach diphtheria are accounted for. Since the days of antitoxin these cases are rarer because, as has been shown by Bauer and Deutsch, there is a marked increase of hydrochloric acid excreted after an injection. The writer does not believe that the gall has any bactericidal power. He was unable to show by his experiments that the intestinal secretions had any antiseptic properties. The bacterium coli communis, however, has a markedly deleterious effect on the growth of the diphtheria bacillus. He was unable to detect Klebs-Loeffler bacilli in the stools of a single patient.

*The Pseudo-Tubercle Bacilli. (Die Pseudotuberkelbacillen).*

ARTHUR KAYSERLING. *Zeitschrift für Tuberculose und Heilstättenwesen, Bd. III, Hft. I, 1902.*

Kayserling points out that even at the time of Koch's discovery of the tubercle bacillus, the leprosy bacillus which has similar tinctorial peculiarities, was already known. Koch himself predicted at the time of his discovery of the tubercle bacillus that more organisms which had the same peculiar resistance to acids would be discovered. In this paper the author discusses the different tubercle-like bacilli which have been described in recent years with regard to their relation to the true tubercle bacillus. With the true tubercle bacilli he ranks the organisms of human, avian, bovine, and fish tuberculosis.

With the pseudo-tubercle bacilli he ranks the smegma bacillus, the bacilli found in the sputum in some cases of lung gangrene, and the bacilli found on various forms of grass which secondarily become transmitted to the feces of cows, and which are also at times found in milk and butter.

He compares with the tubercle bacilli particularly this group of grass bacilli. The most important members of the group are the timothy bacillus, grass bacillus II (Moeller), the butter bacillus of Korn, and Moeller's manure bacillus. The author compares the two groups of organisms from a morphological and a biological standpoint.

Morphologically there is no real point of distinction between the true bacilli and pseudo-tubercle bacilli. At times the pseudo-bacilli show long thread-like forms and branching, but the same is occasionally true of the true bacillus.



Biologically it is found that the pseudo-tubercle bacilli grow more rapidly than human tubercle bacilli, and all of them show a pigmented growth, varying from light yellow to reddish yellow. Some forms of true tubercle bacilli, however, as the fish bacilli, grow quite rapidly, and the bovine bacilli produce some pigment. Inoculation of most of the pseudo-tubercle bacilli into animals produces nodules with the structures of true tubercles, but these show no tendency to spread, and apparently only form where the bacilli originally inoculated are carried by the circulation. The fundamental difference between the true and pseudo-tubercle bacilli lies in the difference in pathogenic action of the two groups. The pseudo-bacilli do not tend to spread and give rise to the death of the animal. That the different forms of acid resistant bacilli probably, however, belong to the same family is rendered probable by the fact that they all show agglutination in the presence of the serum of immunized animals.

### OPHTHALMOLOGY

Edited by C. M. Culver, M. D.

*Kinescopy, a New Method of Testing the Refraction of the Eye. (Kinescopie, Nouvelle Méthode de Détermination de la Réfraction Oculaire.)*

HOLTH, (Christiania). *Annales d'Oculistique, April, 1902.*

Six years ago, when Holth was making some other investigations regarding the eye, in the course of which he looked fixedly at a white disc on a black background, he noticed that, on winking, the object underwent an apparent displacement. He ascribed this to a supposed coincident movement of the eye, but further investigation convinced him of the incorrectness of this assumption; for he found that, when fixing the object, if he, without winking, interposed a piece of cardboard between himself and the object, but much nearer to the eye and not in the direct line of fixation, the edge of the card appeared to push the fixation object before it; this was true of the vertical meridian of his eye, in which meridian it is myopic; the same manœuvre, practiced on the horizontal meridian, in which his eye is hyperopic, made the fixation object appear to move in the contrary direction. On repeating the experiment, while wearing the exact correction of his ametropia, no movement whatever could be discovered. This suggested the use of the method for the determination of refractive errors and this idea was fortified by the case of a man who sought compensation for loss of vision in one eye. The patient would not admit more than 6-60 of visual acuity with any lenses and the objective methods of examination were much hindered by the smallness of the pupil, which was also bound down to the capsule and could not be dilated. Six meters from this patient was placed a white object ten centimeters in diameter, which the patient viewed through a slit one millimeter in width. When this screen was moved in a direction perpendicular to that of the slit the patient admitted that the object moved against the movement of the screen until a lense of 3.0 dioptries, convex, was worn. This was true for all meridians, and made it probable that hyperopia of three dioptries existed. By dint of diplomacy on the examiner's part, the patient, a man fifty-three years old, was induced to admit



vision of 6-12, when wearing a correcting lens of the strength thus determined. Such an examination can be made with no further apparatus than the usual trial frames and lenses and stenopaic slit; but it is somewhat difficult to make the movement of the slit keep to exact meridians, hence Holth has had an instrument, which he calls a kinesiometer, made. With this instrument Holth has examined numbers of persons with varying degrees and qualities of ametropia, has compared the results with those obtained by the best known optometric methods, and has been well pleased with the former. With some persons the accuracy of the method is very great, a difference of 0.25 D. being quite sharply appreciated. The method requires, when it is a question of oblique axes of astigmatism, a deal of intelligence on the part of the patient. In such cases, it is desirable, as it is in all methods of examination, to correct the most aberrant meridian by the strongest convex lens obtainable (of course, in cases in which such a lens is at all applicable), and correct the astigmatism by a concave cylinder, in order to remove as much as possible the temptation of the patient to accommodate. Especially when the pupil is artificially dilated, some patients declare that no lens that is placed in the frame produces immobility of the test object. This is due to the aberration of rays passing through the less central area of the cornea; but if no mydriatic is used, some patients manifest ability to detect the least movement. For instance, one of Holth's patients said that the image travelled against the slit, when a convex lens of 3.75 D., was worn (under correction), and with the slit when a convex lens of 4.0 D. (over correction) was used. If it be desirable, for other reasons, to dilate the pupil, a circular stenopaic aperture may be used, in conjunction with the slit, as an artificial iris, but Holth finds this distinctly less satisfactory than leaving the accommodation alone.

Kinescopy, though useful under all conditions in which the refraction has to be tested, finds its chief value in those patients in whom the acuteness of vision is low, either naturally or from some haziness or opacity of the media; and, as has been indicated, where simulation is suspected. In one or two albinos, also, Holth found it to prove very valuable, for not only was vision indifferent, but the pupil contracted so extremely when the ophthalmoscope was used, that these methods of examination were very difficult indeed. Even in two cases of congenital nystagmus he was able to determine the refraction exactly, although at first sight one might suppose the method to be inapplicable in such a condition; in congenital nystagmus, however, the patient attributes to the object looked at no pathological motion.

The explanation of the apparent movement undergone by a fixed object during uncorrected ametropia may be expressed thus: Suppose, for convenience, that in each of the three cases the slit travels from above downwards: in the emmetrope, since the rays coming through any part of the pupil are focussed on one spot upon the fundus, there will be no apparent movement; in the hyperope, the rays striking the retina before focussing, the image will travel down the retina, and the fixed object will, therefore, be considered to be moving in the opposite direction to that of the slit. In myopia, the rays having already crossed, the direction will be reversed in the fundus (up the retina), and, therefore, will be direct after pro-

jection; the object, in other words, will be supposed to travel with the stenopaic slit.

From the study of this unusually interesting paper one may readily believe that kinescopy will prove of much value under various circumstances.

*The Operative Treatment of High Myopia by Means of Primary Linear Extraction of the Clear Lens, and its Results. (Ueber die operative Behandlung hochgradiger Kurzsichtigkeit mittels der primaeren Linearextraction der klaren Linse und ihre Erfolge.)*

VOIGT. *v. Graefe's Archiv fuer Ophthalmologie, Band LIV, Heft 2.*

While most ophthalmic surgeons, in removing the clear lens for high myopia, prefer to perform a preliminary needling, followed in a few days by extraction of the swollen and opaque lens matter through a linear incision, Voigt advocates a bolder technique, the clear lens matter being evacuated through a linear incision at the first operation without previous needling. He maintains that the objections urged against this method are theoretical rather than practical, and that the experience of the Leipsic University Eye Clinic is strongly in its favor. Among the chief advantages claimed are these:

(1.) Multiplicity of operations is avoided and, therefore, risks of infection lessened. As a rule, only two operations were found necessary, viz.: linear extraction and, later, needling of the capsule to obtain a clear pupil.

(2.) Glaucomatous symptoms are much less frequently met with, viz.: in two per cent. of cases as compared with eight per cent. by the older method. From two-thirds to three-fourths of the total mass of the lens should be readily enough evacuated at the first sitting, and, as a rule, what remains undergoes absorption without trouble.

(3.) The duration of treatment is much shortened. This is a point of importance, especially in working-class patients.

(4.) Loss of vitreous is less frequent. As it is very generally admitted that this accident greatly predisposes to detachment of the retina, as well as to inflammatory complications, its avoidance is of primary importance.

In order to show statistically the advantages of this operative method, Voigt cites the experience of the Leipsic Clinic. As regards the multiplicity of operations he finds that on fifty-seven eyes operated on by the old method 178 operations were done, while by the newer technique on eighty-one eyes only 151 operations were needed in the course of treatment. It is noteworthy, however, that the additional operative interference rendered necessary by the old method of treatment apparently consisted, for the most part, merely in the puncture of the anterior chamber.

Loss of vitreous occurred in only 4.6 per cent. of the cases operated on by the newer method, while by the older method it occurred in 17.4 per cent. of the cases. This difference is ascribed to the fact that, after needling, the operator has often to perform linear extraction when increased tension is already present.

As regards the selection of cases, Voigt, for his part, would give all

patients with a myopia over 15 D. the option of operative treatment. Staphyloma posticum or choroidal changes near the macula do not, in his opinion, form a contra-indication, if there are no retinal detachment and no pronounced changes in the vitreous. As regards the age limit, he thinks the operation may be safely and readily performed up to forty or even forty-five years. Voigt approves of operating on both eyes in suitable cases, his object being to establish binocular vision and enable the patient to keep his work further away from his eyes. He thinks the progress of a myopia more certainly arrested by this than by any other method. When, however, a patient has the use of only one eye, he would be less inclined to interfere. The danger of the operation, as shown in the series of cases quoted, appears to be considerable, for three eyes were lost through infection out of 150 operated upon.

As regards the question of retinal detachment, Voigt is of opinion that the operation does not predispose to its occurrence. This view he supports by a comparison of the relative frequency of detachment in highly myopic eyes with and without operation. Such a comparison seems very difficult to make without risk of fallacy, and only an extended experience of the operation can clearly establish the facts. The visual results obtained were highly satisfactory, the majority of the patients being nearly emmetropic after operation. Increase of the myopia after operation was not observed in any of the cases.

*Traumatic Optic Atrophy. (Atrophie optique traumatique.)*

PECHIN. *Le Progrès Médical*, 16 February, 1901.

The author considers, in this article, cases of optic nerve atrophy in which the cause has been traumatism, solely. Twelve cases, reported by by eight authors, are cited, and the following conclusions drawn:

1. After a traumatism, which consists in the penetration of the eyeball by a foreign body, at either the inner or outer canthus, when the foreign body does not remain in the orbit, and even without apparent lesion, whether external or internal, the prognosis should be very cautious and reserved.
2. Complete amaurosis, even when not accompanied by lesions discoverable ophthalmoscopically, should beget fear of a grave lesion of the optic nerve; which lesion will be denoted, with a delay whose duration is difficult to predict, but which is likely to be short, by a discoloration, and later by progressive optic atrophy.
3. This optic nerve atrophy may be accompanied by ocular paralysis, whose prognosis is dependent on the intensity of the lesion of the muscle or of the nerve which supplies it.
4. At the outset, the differential diagnosis between the kind of affection under consideration and the accidents due to traumatic hysteria or simulation, may present genuine difficulties which it is so much the more important to surmount, since, to the question of diagnosis may be added a medico-legal one.
5. Traumatic atrophy of the optic nerve should be differentiated from the atrophy consequent on fracture of the optic canal, the latter consequent, in turn, on fracture of the base of the skull or of the vault of the orbit.

# ALBANY MEDICAL ANNALS

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## Original Communications

FOR THE ANNALS

DR. LORENZ'S CLINIC IN NEW YORK,

DECEMBER 18, 1902.

By CHARLES EDMOND DAVIS, M. D.,

Surgeon to the Child's Hospital, Albany, N. Y.

One can hardly judge of Dr. Lorenz by the work he has done in this country. Here he has confined himself to the treatment of one class of cases, by which he is most largely known, that is, congenital dislocation of the hips.

During the many years in which he has been treating this deformity by the various methods now known to science, he has been regarded as one of the foremost men in orthopedic surgery in Europe, and he has evolved many new methods of treatment in most of the deformities with which children are afflicted.

His bloodless operation for the cure of club foot is quite as remarkable in its way as the operation for dislocation of the hip, and the result, as compared with other operations on the feet, is far better, because this method eliminates the possible chance of infection.

Dr. Lorenz's clinic in Vienna is probably one of the largest for the treatment of orthopedic cases in Europe, and he there has had a very large number of cases of all kinds of deformities to select from, therefore it cannot be strange that he should be able to evolve the best line of treatment for any particular deformity to which he might give special attention.

Prof. H. Augustus Wilson, in *American Medicine*, among



other things, had this to say of the history of the treatment of congenital dislocation of the hip: "Dupuytren announced in 1828 his conviction that congenital dislocation of the hip was not only wholly incurable, but even that palliation was impossible. \* \* \* Up to 1887 this theory was accepted by the profession. In that year Dr. Brown, of Boston, reported a case that has become famous, in which he proved the curability of this condition by the long extended use of recumbency. His patient was kept on his back for thirteen months, with extension continually applied. The result was restoration of function. In 1890, Hoffa, of Wurtzburg, first directed attention to his cutting operation \* \* \*."

Lorenz became interested in this method and one of its strongest advocates, and continued to perform it until about three years ago, when he brought out his present form of treatment, and it has since been known as the Lorenz Method.

"Paci, of Pisa, previous to this time, had tried unsuccessfully a cure of congenital dislocation of the hip, and by some is referred to as having originated the method which Lorenz perfected. Lorenz clearly proved its applicability to suitable cases, and established its permanency and freedom from the mortality which followed the Hoffa cutting operation. To Lorenz belongs the credit of discerning that the method is applicable in early childhood, before growth changes to the acetabulum, head of the femur and surrounding structures have taken place.

"Much of the severity of the bloody operation is rendered unnecessary if the bloodless method is first efficiently practiced. The method has often been applied in unsuitable cases, and yet the permanent cures by American operators has been twenty-five per cent.; Lorenz has had about sixty per cent. of cures;" perhaps partly due to the fact that he does not operate on cases by his method over ten years of age.

On December 18, 1902, at the Hospital for the Cornell Medical College, New York City, in the presence of four hundred and fifty students and doctors, some of whom were the most distinguished in the profession, including such men as Drs. Gibney, Schaffer and Sayre, among others present being Drs. A. Vander Veer, Charles E. Davis, H. E. Mereness, C. H. Richardson and C. H. Haskell, of Albany, Dr. Adolf Lorenz, of Vienna, conducted Dr. Shaffer's clinic.

Of the many cases of congenital dislocation of the hip presented at this clinic, some forty in all, Dr. Lorenz selected three,

aged four, five and six years, respectively. In his lecture on the subject of congenital dislocation of the hip, which was read from manuscript, Dr. Lorenz said that the question of age in relation to the treatment of these cases was most important. Treatment should not be attempted after six or seven years in cases of bilateral dislocation, in unilateral cases nine to ten years. The oldest case upon which he had ever operated was twenty-three years. He had operated two hundred and sixty times by the open or bloody method and had had six cases of bilateral ankylosis of the hips with four deaths. Such a result cannot, he believed, be obtained from the use of his present method of treatment. He has employed this method for three years with good results, that is in all cases he had a functional result, and, as he said, no more up-and-down motion of the hip. In most of the cases he had had a functional and an anatomical result; that is, the joint was restored and developed. In other cases, owing to the flattened head of the femur, and the lack of development of the acetabulum, and also in the neck of the bone, a cure anatomical had not taken place, but the functional result was good and a great improvement on the previous deformity.

In old cases a certain preparation was necessary before it would be possible to reduce the head of the femur to a point opposite the acetabulum. This consisted in stretching the adductor muscles and long muscles of the thigh. In some of these cases he had formerly resorted to subcutaneous sections of the muscles, but lately had not found this necessary.

The operation Dr. Lorenz called the "functional weight-bearing method." "The first step is to reduce the head of the femur to a point opposite the place where the acetabulum should be. This is the difficult part of the operation, and is possible only in children before the age of ten years, the younger the better. The second step is fixation by means of plaster of Paris casts for a period of time ranging with the age of the case from ten to eighteen months. The time of this period it is far better to make too long than too short. The third step is massage, with passive movements of the joints, such as flexion, extension, super-extension, and abduction."

The first case was a child six years of age, well nourished and apparently healthy, with a right unilateral dislocation. The shortening was apparent.

The first manipulation consisted in grasping the thigh and leg

with both hands while one assistant held the thigh and body of the child on the opposite side, the operator forcing the head of the femur up and down, which the doctor called a "telescope" movement, in order to loosen the head from its false attachments above the brim of the acetabulum; then forcibly adducting the thigh, this time using the weight of the body against the outer surface of the thigh as well as considerable force with both hands. Next the adductor muscles were stretched by super-abduction of the thigh, with the pelvis fixed as far as possible by an assistant. The stretching of these muscles was assisted by kneading and pounding with a great amount of force the adductor muscles while the thigh was being held at a point of extreme abduction. Next the posterior muscles of the thigh were stretched by flexing the leg on the body, again using the operator's weight to do this. The anterior muscles of the thigh were stretched by placing the child on its belly and super-extending the leg so that the heel of the foot touched the buttock.

After the muscles were stretched in this manner, and the head of the bone loosed from its attachments, extension was used to reduce it to a point opposite the acetabulum. This was finally accomplished after applying sufficient strength on the part of the operator to require two assistants to hold the child on the table.

After the head was brought down to the acetabulum, the thigh was again forcibly abducted and the head of the femur forced upward and forward into the groin, to stretch, so the doctor said, the capsule of the joint. The head of the bone could be seen in the groin where a depression had existed before, that is when the thigh was at almost right angles to the pelvis. In this case the thigh was depressed backward, as well as abducted, in order to get some degree of extension. In this position the plaster cast was applied, to remain for six or eight months before being removed.

The time required for this operation was eighteen minutes, the case being an unusually hard one. Dr. Lorenz said it was the most obstinate he had had during the year.

The second case was a left leg, child five years old. The same procedure, but with not nearly as much force. The bone was in position in twelve minutes.

The third case was that of a child four years of age, and the hip was reduced in less than five minutes, by far the easiest of the three.



Dr. Lorenz said that occasionally he did fracture the neck of the bone, but it had not interfered with obtaining a functional result. The only dislocation possible after this stretching and loosening of all muscles and ligaments of the joint is an interior pelvic dislocation, which is easy of reduction.

In all these cases, after the head of the bone had been reduced to the acetabulum, Dr. Lorenz dislocated it many times to demonstrate the distinct feeling and sound when the head of the bone found the socket. Of course, he said, this will not occur in cases in which there is not at least a depression for an acetabulum, but in the cases demonstrated an acetabulum was found, although in all cases it was shallow, and in one case the rim was deficient.

When the bone had been reduced to the acetabulum, Dr. Lorenz tried to extend the leg in order to ascertain how near the median line it could be extended without producing a dislocation. In the last two cases the median line could be approximated within about five degrees.

The method of applying the plaster cast, while not new, had some valuable features. A pair of drawers, made from stockinet, extending down to the junction of the middle third of the thigh and upward to a point midway between the umbilicus and the pubes, was applied, and over this strips of sheet wadding about six inches in width, in the form of a roller bandage, was also applied. Then over this the four inch plaster bandages were applied in a figure of eight, covering both hips. Of course, the leg was held by an assistant in an extremely abducted position. The plaster was very thickly applied to the depth of at least one-half inch. Before the plaster had completely hardened openings were made for the vagina and anus and the edges of the cast neatly trimmed. This was very easily and quickly done with a sharp scalpel. Then the sheet wadding was removed. This allowed considerable space between the skin and the plaster, although the plaster was tightly applied over the cotton. Underneath the stockinet, strips of cotton were now passed from above downward and allowed to remain in position so as to occasionally rub the skin and keep it in a healthy condition. The doctor said to give the skin a dry wash and relieve the itching and irritation.

After the leg has remained in position for from six to ten months the angle of abduction is reduced about one-half and the plaster re-applied for three or four months, after which time the



leg is brought to a straight line and again put into plaster and kept in position for three to four months. The plaster cast is then removed and movements of flexion, extension, super-extension and abduction complete the treatment.

During all the time the leg is in plaster, after the first week the child is instructed to walk and use the leg. This is done by placing upon the foot of the leg in plaster a high shoe. The plaster allows of some motion of the bone at the joint, which is desirable in order to stimulate both the acetabulum and the head of the femur to develop normally.

The case of club-foot operated upon was of equino-varus of both feet. There was not sufficient contraction of the tendon of Achilles to warrant a subcutaneous section, which is done in all cases where there is great contraction of the tendon.

Dr. Lorenz operated upon one foot while his assistant operated upon the other. The operation was performed by grasping the toes in one hand and the heel of the foot in the other, all of the parts, skin, plantar fascia and ligaments being stretched over a block of wood covered by leather used for the purpose. To accomplish this the force applied was gradually increased until the strength and weight of the operator were applied to the foot. The stretching was not continual, but was alternating in character and included all parts of the foot until the resistance of the contracted parts was entirely overcome and the foot reduced to a normal position by the weight of the body. The time occupied in accomplishing this was about twenty minutes.

After this a plaster cast was applied from the knee to the toes with the foot reduced to a normal position. The operator explained that in applying plaster all pressure must be avoided. In this operation the danger from pressure was not as great as in cases in which all resistance of the parts had not been entirely overcome.

After the cast was applied the toes were freed from plaster and an opening cut in the anterior portion of the plaster over the foot, in order to ascertain if the circulation was perfectly good. Dr. Lorenz said he had lost a foot by gangrene in his early days of applying plaster, because of pressure, since which time he had always been most careful to see that there was no interference with the circulation.

The subsequent treatment in these cases consisted of applying

a shoe over the plaster cast, and after a week or two allowing the child to walk. The plaster cast was left on for six months.

In some cases after the plaster is removed there is a tendency to flat-foot. This is overcome by re-applying the plaster for another period of time, or treating the deformity by a mechanical insole in the shoe.

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## INFANTILE DIABETES MELLITUS

### WITH REPORT OF CASES

*Read before the Medical Society of the County of Albany, December 10, 1902*

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The early history of infantile diabetes mellitus contains short clinical accounts of a few cases; the age of the patients and the short duration of the disease in them making anything but clinical observations very difficult; much more so than in the adult form. Few cases were reported previous to 1880 and these cases did not serve as anatomical or physiological studies.

In 1674 Thomas Willis clearly recognized diabetes insipidus as a distinct disease, and in 1696 Morton gave a short description of a case in an infant whose father had a like complaint; but John Rollo (1798) seems to have the honor of being the first one to make a detailed report of a case of diabetes mellitus in an infant. From this time to the middle of the nineteenth century, occasional clinical descriptions were published, mostly in individual communications.

A perusal of the text-books on diseases of children shows they have been particularly silent on the subject and general works on diabetes have usually failed to mention any peculiarities of the disease when existing in children.

It was not until 1877, when Ollivier and Lecorché<sup>1</sup> wrote, that the subject received any systematic study. In the same year, Bohn<sup>2</sup> gave a review of acute diabetes in children.

A little later, two important works appeared; one in Tübingen and the other in Paris. Kulz<sup>3</sup> (Tübingen) wrote an important monograph in 1878 and a little later Henri Leroux wrote his celebrated paper (Thèse de Paris, 1880), which contained not

only all that was known on the subject up to that time, but pointed out much that was new.

After this, infantile diabetes was more fully gone over and all recent observations noted up to that time in the classical works of Picot and Despine, Descroizilles, Bagnisky and West;<sup>4</sup> the latter writing somewhat extensively in the seventh edition of his "Lectures on Diseases of Infants."

The whole subject is again more fully gone over in the following three interesting works: a thesis by Beilousoff,<sup>5</sup> an article by the talented Lancereaux and a critical clinical study by Curt Stern<sup>6</sup> in which he gives complete studies and statistics of one hundred and seventeen cases; making seventy-five new cases since Kulz wrote his paper, a period of eleven years.

The article written by Lancereaux calls special attention to the close relation existing between diabetes and pancreatic disease; a fact that was known since 1851, when Bouchardat first definitely connected the two conditions.

In 1893 Hagenbach<sup>7</sup> gave the histories of two cases; one in which gangrene of the lung occurred with the diabetes, and a case of diabetic coma in a child eighteen months old.

Schmitz,<sup>8</sup> Grosz,<sup>9</sup> Jaworski<sup>10</sup> and L. Rosenberg<sup>11</sup> have also written on the subject; Jaworski reporting a case in which a fall was the possible cause; Grosz giving the result of a study of Trommer's test in fifty nurslings; Schmitz reviewing the literature from 1874 to 1891; and L. Rosenberg presenting a study of one hundred and ten cases collected, in which six cases were under the age of two and one-half years.

In 1895 the extensive and instructive work of Wegeli<sup>12</sup> appeared. This work contains a series of original statistical, clinical and biographical researches collected since Kulz's paper, with one hundred and eight cases and accompanied by copious detailed chemical analyses.

Caron, cited by Jacobi,<sup>13</sup> reports the cases of three children who had diabetes. They all had the same mother and their ages were three and one-half years, one and one-half years and three months.

The Surgeon-General's Catalogue contains a long list of articles, in which several cases are reported; one in our own ALBANY MEDICAL ANNALS by Dr. W. G. Murphy.<sup>16</sup> Henri Leroux<sup>17</sup> has probably written the most comprehensive work on the subject during the last five years.

Infantile diabetes is relatively a rare disease, although it is not

as rare as some authorities would have us believe. It seems to be on the increase, but it is possible this increase is only apparent, as there is less difficulty in detecting the disease now than in former years.

C. Stern collected one hundred and seventeen cases; forty-seven females; thirty-one males, and thirty-nine in which the sex was not mentioned.

One case seemed to be born with it; six were under one year; seven over one year; three over two years; seven over three years; six over four years; five over five years; one over six years; six over seven years; two cases at eight years; eight at nine years; six at ten years; nine at eleven years; eight at twelve years; nine at thirteen years; five at fourteen years; four at fifteen years.

In twenty-eight cases the age was not given.

Prout<sup>18</sup> collected seven hundred cases of diabetes, in which there was one case of the infantile form at the age of five years. Meyer<sup>18</sup> reports one case out of three hundred and eighty cases collected. Pavy<sup>18</sup> collected thirteen hundred and sixty cases of diabetes, eight of which were under ten years of age. Sir William Roberts<sup>19</sup> collected four thousand five hundred and forty-six cases of diabetes that died in England and Wales between the years 1851 and 1860. One hundred and thirty-three of these occurred under ten years; twenty-eight males and twenty-three females under five years; and forty males and forty-two females between five and ten years.

From the same source<sup>19</sup> we learn that in England and Wales, between the years 1861 and 1870, there were reported six thousand four hundred and ninety-six cases; four thousand two hundred and seventy-three males and two thousand two hundred and twenty-three females. Of these cases eight were under one year; nineteen under two years; sixteen under three years; fifteen under four years; sixteen under five years.

Forty-one of these were males and thirty-three females.

Sixty-two males and fifty-two females were reported between the ages of five and ten years.

In New York City one case was reported in 1880, two in 1882 and one in 1884.<sup>19</sup>

The existence of diabetes mellitus during intra-uterine life has not been demonstrated; although the case reported by C. Stern, in which the disease was noted a few days after birth, and the



case mentioned by W. B. Bell<sup>21</sup> in which the disease appeared at three months, makes it probable that it can occur during intra-uterine life. Matthew Duncan<sup>22</sup> detected sugar in the fluid accumulations of a case of hydramnion and the child is reported as being diabetic. The disease is said to be most frequent about the age of five years.

There is a difference of opinion as regards the sex relation in infantile diabetes. From a study made by Wegeli<sup>12</sup> of one hundred and eight cases, both sexes seem to be about equally affected. James Tyson<sup>23</sup> states the sex relation is reversed in children and Fitcher<sup>24</sup> claims the disease is more common in girls. The proportion of males to females was five to three as recorded by C. Stern.

The etiology of infantile diabetes is indeed more obscure than in the adult form. With but few exceptions, the same etiological factors are responsible for the disease at all ages. It is doubtful whether worry, shock or emotion can produce the disease in children, as the child is not susceptible to these influences to any great extent. Heredity seems to play the first rôle, although the heredity is seldom direct; it is the predisposition to the disease that is inherited. Several members of certain families are frequently affected, as the following example well shows:

W. D., male, age 28, telegraph operator, resident in Ravena, N. Y. Patient has been under my care for diabetes for the past three years. Three brothers have died of diabetes; A. D., sick eight months and died at the age of thirty-four years; B. D., age at death twenty-seven years, and sick four months; C. D. was only fourteen years old and he was not known to be sick until three days before his death. Both parents of these cases are alive and in perfect health.

It is said diabetic children belong to families in which phthisical, uric acid or neuropathic affections prevail, and obesity and gout frequently exist in these families.

Dentition, diet, locality, rapid growth, hygienic surroundings, excesses of various kinds, injuries (especially of the head and vertebral column) and pre-existing disease have all received their share of blame. Gastric catarrh is the most notable pre-existing disease.

According to a report by Higgins and Ogden<sup>24</sup> injuries of the head that cause diabetes vary from mere scalp wounds to fracture of the base of the skull. The highest percentage (23.8 per cent.)

occurred in fractures of the base. There were twenty cases of glycosuria in two hundred and twelve cases of head injuries collected.

The many anatomical, chemical and physiological causes of glycosuria and diabetes will not be mentioned in this paper, as many of them are more or less hypothetical and can be found in text-books.

As all authorities agree that lesions of the pancreas are particularly liable to give rise to diabetes in the adult, it is reasonable to suppose that some of these lesions can also produce the same disease in children. It has been conclusively shown that the pancreas regulates the carbohydrate metabolism and the pancreatic form alone will be dwelt upon in this paper. Not that the cause of diabetes always resides in the pancreas, but rather because such positive evidence has been collected that our knowledge concerning pancreatic diabetes is most complete.

Physiologists tell us the offices and functions of the various tissues are best performed and maintained when the systemic blood contains from 0.1 to 0.2 per cent. of sugar and these percentages may be considered normal.

In what manner the pancreas exerted its influence in keeping this percentage normal was not known until recently. Through the experimental researches of von Mering and Minkowski,<sup>26</sup> and the microscopical studies of Scobolew,<sup>27</sup> Opie,<sup>28</sup> Weichselbaum and Stangel<sup>29</sup> our knowledge concerning the close relationship between pathologic conditions of the pancreas and diabetes has rapidly grown and we have, at last, an intelligible idea of at least one form of the disease.

De Dominicis, who first experimented on the complete removal of the pancreas, denied that diabetes invariably followed the complete removal of the gland and he was sustained in his opinion by De Renzi and Reale. On the other hand, von Mering, Minkowski and Lepine claimed that extirpation of the pancreas in dogs caused, without exception, a severe grade of diabetes and Haller noted that the same operation was followed by increased hunger and thirst. Minkowski based his opinion on fifty-five experiments on dogs. Claude Bernard got no result from tying off the duct of Wirsung and Schiff injected fat into the ducts, which produced an atrophy of the gland, but no diabetes.

These and many other experiments, showed that diabetes is independent of the digestive function of the gland and depends upon

an internal secretion and is in accord with the theory of Lepine and Barrol, who asserted that there was an enzyme (glycogenic enzyme) in the blood capable of destroying sugar or controlling the consumption of sugar by the tissues.

That the pancreas regulated the carbohydrate metabolism by an internal secretion and that a failure of the functioning of this organ gave rise to diabetes was thus well known; but it remained for Scobolew<sup>26</sup> in 1900, to throw much light on the subject, when he called particular attention to the fact that there was no result from tying off the duct of Wirsung, because this procedure simply produced an atrophy of the gland in general and the tissue left consisted practically of nothing but the islands of Langerhans.

Finally, the classical contributions of Scobolew,<sup>27</sup> Opie,<sup>28</sup> Weichselbaum and Stangel,<sup>29</sup> and Herzog<sup>30</sup> proved almost beyond a doubt that it is the function of the cells of the islands of Langerhans to produce an internal secretion that controls sugar metabolism and that certain lesions of the islands of Langerhans give rise to diabetes.

Until quite recently, the pathology of diabetes was as obscure as the etiology. No constant lesions were discovered that distinguished the disease. In fact, many of the lesions found post mortem were simply degenerations consequent upon the disease.

In 1900 Scobolew and Opie called particular attention to the islands of Langerhans and the subsequent studies of Weichselbaum and Stangel, and Herzog seem to point to certain lesions of the islands of Langerhans as specific in pancreatic diabetes.

While none of these lesions have been demonstrated in infantile diabetes, the fact that Weichselbaum and Stangel found like lesions in a study of eighteen cases, ranging in age from fourteen to seventy-five years, makes it probable that some of these lesions may also exist in the infantile form; and the more so as the fourteen year old case would be a border-line case of infantile diabetes.

Although the evidence is thus incomplete and pancreatic changes in infants have not been proven, the latest microscopical studies of the adult pancreas are of such fundamental importance that I invite your attention to a brief consideration of the pathologic changes recently recorded in the literature.

The latest microscopical studies show that the pancreas weighs between forty and one hundred grams; that it is thinner and narrower than in health and infiltrated with fat. Its length is about normal, the glandular tissue is diminished in bulk and the



whole organ is more or less hard and nodular. In other cases the gland is smooth, of a brown color and adherent to surrounding organs. As a rule the organ is not pigmented, but in the so-called bronzed diabetes there is a deep pigmentation associated with the interstitial pancreatitis. On section the acini are very prominent and there may be found concretions in the ducts.

On microscopical examination, the interlobular and interacinar connective tissue is increased and there is a proliferation of the fibrous stroma in the tail of the organ, where the islands are most abundant. Sometimes there is a round cell infiltration in the connective tissue and occasionally there is a fat necrosis. The islands of Langerhans are diminished in number, the capsule is thickened and the intra-insular connective tissue is increased. The islands are narrow, irregular and compressed and the protoplasm of the cells is slender, thin and may be reduced to mere granules. The nuclei are smaller, more oval and stain deeper than normally; although Herzog reports a case in which the nuclei stained poorly.

In some cases few islands can be found and those found are smaller than normal; in fact, many of the islands have disappeared from the pancreas, leaving nothing but nodules of connective tissue in their place. On staining with eosin, the islands may be found to contain hyaline material and this material may occupy almost the entire island. This hyaline substance may resemble swollen, degenerate cells or swollen old connective tissue and may be of epithelial origin or due to degenerating obliterated capillaries. Other islands contain little masses of hyaline material about the size of the island cells and irregular in shape. Sometimes this hyaline material is found in groups of cells, sometimes in contact with the peripheral fibrous tissue; but most often it is found between the remaining cells and capillary wall.

In other cases there are hemorrhages in the insular tissue of the islands. Sometimes there are areolar spaces (fatty degenerations) next to the islands and in other cases the entire island may consist of old, fibrous connective tissue.

The following report gives a very clear picture of the symptomatology of the disease.

J. S., male, age three years; had been, up to this sickness, rather plethoric but healthy. Family history negative, save one maternal cousin died of diabetes at the age of nineteen years. On December 1, 1898, mother requested medicine for nocturnal enuresis and stated that the child had lately acquired the habit of drinking large quantities of fluid



foods, especially for supper. He also drank considerable water during the evening. I did not see the child and gave no medicine. I advised that no fluids be allowed in the evening, requested the mother to report in a short time, furnish me with a specimen of the urine and bring the child that I might examine him.

On December 18th the father called, stated his son was no better; that he was passing large quantities of urine and that he was extremely nervous and was constantly twitching.

An examination of the urine revealed the following conditions: Urine, color of water; reaction, acid; specific gravity, 1036; albumen, none; Sugar, present to marked extent (Fehling's test).

On physical examination, the child was found very much emaciated and anæmic. Temperature, 98° F. (rectum); pulse, 110 and weak; respiration, 28 to the minute; tongue pale and slightly coated; breath, offensive but without sweetish odor. The skin of the scalp was rough, the hair dry and there was considerable loss of hair. The body skin was rough and dry, and there was a marked dermatitis wherever the urine came in contact with the skin. There was also a balano-posthitis, prepuce rather long but no phimosis; no boils, carbuncles or eczema; nothing abnormal about the abdomen. In spite of the fact that the heart, lungs and throat were normal, there was a decided cyanosis, especially of the lips. The feet and hands were cold. The pupils were dilated, reacted slowly to light, and the child acted as if he could not see well. He was peevish, restless and in distress from itching. He appeared to be on the verge of a convulsion or coma.

The mother said he had changed lately in disposition; he had become morose and irritable and paid little attention to his toys and playmates. For the past three weeks he had been passing large quantities of urine during the day, as well as at night, and his clothes were constantly wet. His demands for water were incessant, and his appetite was ravenous. His bowels were markedly constipated, and he was becoming thinner every day.

The mother stated, of her own accord, that all these symptoms developed after a fall from a high-chair, the top of his head striking the side wall. This fall did not render him unconscious, but he was dazed and a little stupid for three or four hours. A careful examination failed to discover any evidence of this accident.

After his bowels had been moved by means of an enema, he was given a high rectal injection of a solution of bicarbonate of soda (three drams to one pint of water), and aromatic spirit of ammonia was prescribed as a stimulant for the cyanosis. The next morning he was placed on a strict diet, and physiological doses of deodorized tincture of opium were prescribed. This caused such marked constipation that it was discontinued and he was given increasing doses of Fowler's solution until the physiological dose was reached, which, in this case, was three drops three times daily.

Three pints of urine were passed during the day and considerable more during the night. Several examinations of the urine, in which both the fermentation and Fehling's tests were used, showed no improvement, and, realizing the hopeless prognosis, I requested consultation. Dr.

Ambrose<sup>\*</sup> Beach, of Coxsackie, N. Y., saw the child and agreed in the diagnosis.

At first, milk in moderation was allowed, but after a while he was placed on an absolute milk diet. Sun-baths, gentle exercises in the open air and massage of the muscles constituted the main treatment. Occasionally he was given a high rectal injection of bicarbonate of soda, and when the lower eyelids became œdematous the dose of Fowler's solution was reduced or temporarily discontinued.

Under this treatment the urine diminished in quantity, sugar gradually left the urine, thirst was not severe, and the child gained in flesh and strength. This improvement continued for about three months, when all the symptoms returned. After a little there was another improvement, which continued to the first of August, and from this until the time of his death there were many ups and downs.

On September 30th he became stupid; October 1st, at 8 p. m., passed into a coma, and died at 4 a. m. October 2, 1898. In the final comatose state the pupils were dilated, equal and did not respond to light. There was cyanosis of the lips, nose and extremities; temperature at 11 p. m., 97½ (rectum); respirations 32, shallow and labored; pulse about 140 and very weak; reflexes abolished.

During this child's sickness, an occasional semi-comatose condition would develop and when in this state, he would remain in any position placed, like one in a cataleptic condition, except that there was no rigidity of the muscles. Cyanosis of the lips and nose was present in this state and the rectal temperature below normal (98°, rectum), pulse 120 and weak; respirations 28 or more and shallow. Possibly this condition was what Kussmaul calls air-hunger, although there was no real dyspnœa.

From three to seven urinary analyses were made weekly. The largest quantity of urine in twenty-four hours was three quarts; the smallest quantity one and one-half pints. The urine was always lighter in color than normal. The highest specific gravity recorded was 1.038 and 1.026 was the lowest. Slight traces of albumen were found in the urine five times, but no casts were detected. For over a month Fehling's test failed to find sugar and for about six weeks no sugar was found by the fermentation test (Roberts' method) which showed that there were less than two and one-half grains to the ounce, or one-half of one per cent. The highest per cent. of sugar was 5 plus per cent. (twenty-two grains to the ounce). Whenever there was over three per cent. of sugar in the urine a semi-comatose condition would develop. During the last two days of his sickness the quantity of urine was diminished and sugar was reduced to two per cent. During the final coma Legal's test showed acetone in considerable amount.

Whenever the sugar approached three per cent. and a semi-comatose condition was noticed, all nourishment was withheld for from eighteen to twenty-four hours. This fasting invariably brought down the percentage of sugar and the semi-comatose condition would clear up. It was an easy matter to carry out the fasting, for when semi-comatose he lost his appetite and in fact did not seem particularly thirsty.

The main article of diet was milk, but occasionally he was allowed lemonade (not sweetened), cocoa, vichy, bouillon, clear soups, buttermilk, eggs, fish, chicken, lemons, oranges and gluten bread.

No recoveries from infantile diabetes mellitus have been recorded. Age, more than anything else, influences the prognosis. The following report shows how rapidly fatal the disease is in young subjects. This is a border-line case and occurred in the practice of Dr. A. T. Powell, of Coeymans, N. Y., to whom I am indebted for the history.

R. W. S., male, age sixteen years; born in Westerlo, N. Y. Father and mother healthy; born in Holland. No diabetes in any of their relations. Complained indefinitely for about two months, but was not confined to the house until two days before death. Wednesday, at 10 p. m., passed into a comatose condition and died Thursday at 12:30 noon.

I saw the case, in consultation with Dr. Powell, at 9 a. m. Thursday, three hours and a half before death. At this time the extremities were cold, reflexes absent, breathing stertorous, and pulse so weak it could not be accurately counted. No cyanosis. Pupils dilated, equal, and did not react to light. Respiration became more shallow until death. This coma lasted fourteen and one-half hours.

Emaciation, polyuria and increased thirst were not severe in this case. Several carefully conducted urinary analyses, made by Dr. Powell, showed the case to be one of acute diabetes mellitus.

The following case is an especially suggestive one, as it indicates the great value of an examination of the urine as a means of differential diagnosis in obscure cases of infantile diabetes, especially when the cardinal symptoms, thirst, polyuria and emaciation are not well marked.

August 25, 1892, I was called to a boarding-house to see a child who was said to be in convulsions. The patient, A. M. L., female, age two years and nine months, had been given every luxury and allowed all the pleasures of an extravagant table. Father living and well. Mother died of pulmonary tuberculosis when this child was one year old. Had nursed her mother up to two months before her death. The patient was robust,

full-blooded, and up to this time the relations had noticed nothing wrong.

When I arrived she was sleeping with her eyes partly open, and there was some slight twitching of the voluntary muscles. Rectal temperature, 103°; pulse, 130; respirations, 24. A careful examination failed to discover anything that would lead one to think of tuberculous meningitis or diabetes, and by a process of exclusion it was evident the convulsion and temperature were due to an intestinal irritation, as the child had been eating unripe fruit found on the hotel grounds.

Calomel in one-tenth grain doses was administered every half hour, to be followed two hours after one grain had been taken by three ounces of citrate of magnesia. A high rectal injection brought away some undigested corn. The next day the child was apparently well.

I did not see her again until the 6th of September. On August 28th she had another convulsion, which lasted over one and one-half hours, after which she remained stupid for some four or five hours. August 31st she had a convulsion, after which she remained in a semi-comatose condition for eight hours. From this time the child was peevish, restless, could not eat, and was inclined to sleep much of the time. She became anæmic and weak, and lost interest in her surroundings. Up to this time she had been under the care of another physician, who, with a consultant, made a diagnosis of tubercular meningitis.

September 6th I again took charge of the case. On physical examination the child's face was found fairly well nourished, pale, with no hectic flush; body emaciation not well marked. She was quite stupid, but not in a comatose state. Rectal temperature, 99; pulse 118, regular but weak; respirations 22, regular and not labored. There was no ear disease, and an examination of the lungs, abdomen and external glands failed to reveal any tubercular foci. There was no retraction of the head or abdomen, no paralysis. Reflexes seemed normal. The pupils were somewhat dilated, equal and responded rather sluggishly to light. I could get no history of projectile vomiting or hydrocephalic cry. There was a dermatitis of the skin of the thighs and buttocks. A careful examination convinced me that the child did not have tubercular meningitis, but, as the relations denied any history of extreme thirst and polyuria, I could not account for the condition. From the fact that there was a dermatitis of the thighs and buttocks, I resolved to examine the urine. This cleared up the whole mystery, as the following report shows:

Color, very light; specific gravity, 1.038; reaction, acid; albumen, trace; sugar (Fehling's test), yes; casts, none; amount of urine not known.

On close questioning the maid admitted the child had been drinking considerable water, and stated she thought the thirst had been due to fever.

The late Dr. Mosher, of Coeymans, saw the case September 7th and, after seeing me make an examination of the urine, concurred with my diagnosis of infantile diabetes. Dr. Mosher, a man of broad experience, suggested that the child be made to fast for twenty or twenty-four hours and then placed on an absolute milk diet for a week or two.



From the first there was a decided improvement. In one week's time the child was sitting up in bed, played with her doll, was bright and quite animated, slept well at night, but never stupid, had perfect control of urine and passed between two and three pints. Was somewhat thirsty.

Urine, light; specific gravity, 1.032; reaction, acid; albumen, none; sugar (Fehling's test), yes.

September 30th, playing out doors, eats and sleeps well, still a little thirsty. No sugar in urine, specific gravity, 1.028; passes between one and two pints daily. The highest percentage of sugar by Fermentation test was three per cent. on September 7th.

Early in October the child was taken to New Jersey and later on in the year to Florida. The father wrote me in December, stating the child had had several draw-backs, but was again better. He promised faithfully to let me know how things progressed, but several letters addressed to his studio in New York came back unclaimed. I heard from a very indirect source that the child eventually died of tubercular meningitis.

The treatment of infantile diabetes embraces dietetic, hygienic and medicinal means. Medicinal means have little or no effect and will be dismissed with a few words. Medicines such as arsenic and iron, whose function is to increase the oxidation of the glucose in the blood, are theoretically and practically better suited to cases of infantile diabetes than are opium, codeine or morphine. Even if the opium group does exert an influence upon the metabolism of glucose, this group produces marked constipation, which is always considered an unfavorable symptom. Thus, it makes a bad condition much worse.

Hygienic remedies are of great value, as they, like arsenic and iron, stimulate oxidation. Glucose is normally oxidized in the muscles, and muscular activity in the form of massage or gentle exercise increases this oxidation.

For the same reason, frequently bathing with soap and water and sun-baths are of service. Iron, arsenic and open air life exert their oxidizing power by increasing the hæmoglobin and red blood cells. As most infantile diabetes are anæmic, these remedies serve a double purpose in producing a palliative effect.

Old diabetics are able to assimilate larger quantities of carbohydrates than are those recently affected and in them the most rational dietetic treatment would be to allow them as much carbohydrates as they can assimilate. But in children, where the disease is more acute, it is of paramount importance to enforce the most rigid diet; one in which the quantity of carbohydrates is reduced to a minimum. Young subjects bear a rigid diet much

better than older ones. On several occasions, I have seen old people rapidly fail when the carbohydrates were too suddenly eliminated from their diets; but in the two cases of infantile diabetes I have reported the sudden transition from a mixed diet to a most rigid one produced a most pleasing effect from the start.

Most authorities allow milk in moderation. In the two cases reported, milk formed the chief article of diet. My subsequent experience with adult diabetes shows that an absolute milk diet, continued for from one to four weeks, has a decided effect on the extreme thirst, polyuria and quantity of sugar in the urine.

In the cases reported, an occasional fast certainly seemed to ward off unfavorable symptoms. In order to illustrate the good results of an occasional fast in diabetes, I wish to insert the following extract from a letter written by one of my patients, who writes:

"In my case, I first noticed the symptoms, thirst and tired feeling, in August, 1899; twenty-eight years old. I have not taken any medicine for past year and find I can control the disease fairly well by dieting and fasting.

"I have also noticed that light meals lessen the longing for drink. Last spring I ate one meal per day for three days, drinking plenty of water during the three days. This lessened the specific gravity from 1.034 to 1.018. When I feel pretty bad, I fast for twenty-four or thirty-six hours, which builds me up quite well."

In view of the fact that three of this man's brothers have died in less than eight months after contracting diabetes, the fasting in this case can be considered as productive of some good.

In experiments on dogs, if a small portion of the pancreas be left, even if its duct does not connect with the duodenum, diabetes does not occur; and dogs rendered diabetic by the complete removal of the gland have had life prolonged by injections of pancreatic extract and pancreatic grafting. In spite of these experiments, products of the pancreas, as pancreatic juice, are of no service in the treatment of infantile diabetes.

Since this paper was written, Dr. F. B. Schwartzlander (*New York Medical Journal*, October 18, 1902, page 679) has reported a case of diabetes in a girl thirty-eight months old. He gives a very clear description of diabetic coma and mentions cyanosis of the extremities as being well marked.

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SURGERY OF THE STOMACH, WITH REPORT OF  
CASES.

ONE CASE OF GASTROSTOMY. TWO CASES OF GASTRECTOMY.

*Read at a Meeting of the Medical Society of the County of Albany,  
October 14, 1902.*

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*Mr. President and Gentlemen of the Society:*

As one travels through the Middle and Western States of our great country, strong impressions are received in noticing the appearance of the people of the prosperous and non-prosperous cities and towns you pass en route. The prosperous towns give you a class full of earnest work, great enthusiasm, absolute faith in what they are undertaking, and their belief in being able to accomplish what they have in hand. This is born of the success which has come to them, they having taken the tide of business at the right time, and doing that which was demanded in an intelligent way. The opposite condition is equally apparent when we come in contact with the non-prosperous residents of other cities and towns.

This is the illustration I would make: That as a profession, at present we belong to the prosperous, successful class. Especially on the surgical side has the art of surgery and its operative technique advanced in such a manner that all those who practice it, on a scientific basis, realize a degree of confidence in their ability to accomplish certain ends, not unlike the residents of the rapidly-growing, and continuously prosperous citizens of the sections of country to which I have referred.

When I look back, and remember the surgery of the abdomen, for more than two decades after my graduation, I can scarcely realize the advances that have been made in this department of our profession.

It is true that operations had been done upon some portion of the intestinal tract, with now and then a successful result. Beaumont's case of gastric fistula had been studied from the standpoint of the physiologist, with great benefit to the profession, but it was a long time after this before an imitation was made of



operative intervention, and my recollections of gastric fistula, after having read fully the history of Alexis St. Martin, date from November, 1874, when I attended a clinic in London, conducted by the late Dr. Murchison. He presented three cases of malignant disease of the stomach that had resulted in fistulous openings, and which were dilated upon by the lecturer. He was very clear in his remarks that much good would surely result from the operation that had been done a few times, but contemplated more recently by the, then, operating surgeon, *i. e.*, making a gastric fistula for relief of stricture of the œsophagus, that could not be treated otherwise. Very soon after this I was impressed by some of the reports made by surgeons in the London hospitals, who had persuaded patients to consent to this operation for comfort, maintenance and continuance of life.

About this time one of the best articles on the subject of feeding the patient through an artificial opening, in a satisfactory manner, was presented by Dr. Pooley, of Columbus, Ohio, a young surgeon who promised a brilliant career in the work he was then doing, and who gave us a clearer definition and classification of the terms gastrostomy and gastrotomy. From this time on operations upon the stomach have developed with the same rapidity, the same certainty of success as have operations upon other portions of the abdominal cavity, and no one can deny but that some of our most brilliant advances in surgical practice have been in connection with attacks upon this one time much-dreaded serous cavity.

Billroth's masterly operation of pylorectomy developed along about this time, in the decade between 1874 and 1884, attracting the attention of thinking, operating surgeons to that extent it seemed as though it was destined to be a definite advance in surgery, and one of the fixed operations, but even greater advances than this were to be accomplished. We were just upon the eve of more brilliant achievements by other operators, which were not long in being developed by the thoughtful, earnest surgeons of the time. At last we had special works upon the subject of gastric surgery, and one who is abreast of what is being done at the present time, cannot but rejoice, and feel a degree of comfort in his profession, when he takes up such a volume as is presented by Mayo Robson on *Surgical Treatment of Diseases of the Stomach*. Here we find a book that presents the subject of my few remarks well up-to-date, here are operations described and

results given in such a manner we realize that it is possible to do almost any operation upon the stomach.

Resections are not so very infrequent, and treatment of gastric ulcer is an established procedure. Billroth's operation is superseded—and with better results in many cases—yet an operation that requires careful surgical skill, and intelligent manipulation of the parts, *i. e.*, gastrointestinal anastomosis, when the pylorus is put absolutely at rest, another opening made in the stomach, and food permitted to enter the intestinal tract without causing any irritation of the pathological surfaces that may present.

A few years ago the profession was deeply impressed, and the world-at-large caught up the seemingly very extravagant operation for complete removal of the stomach, believed to be quite impossible, as the critics considered the first report of the operation. There are many lessons to be learned from these advances that have been made in all that pertains to surgery of the stomach. Perhaps there is no part of operative surgery in which the operator has to keep in mind so clearly the best procedure, as when he opens the abdominal cavity and attempts to do an operation upon the stomach. He may have ever so clearly in mind what he believes to be the best operation before the incision is made but not infrequently conditions present, when the stomach is exposed, necessitating an entire change in his procedure. He may think it best to do a pylorotomy, he may think it best to do a pyloroplasty, he may think it best to do a resection, or it may be better still to do a gastrointestinal anastomosis, or a gastrectomy. For all these conditions he must be prepared.

For many years surgeons in operating upon the intestinal tract, for the relief of obstruction, resulting from a cancerous mass about the rectum, have been greatly impressed with the arrest of the pathological condition, in some cases quite a marked obstruction being relieved, and the tendency for the parts to heal. This is well illustrated in operations upon the stomach. By putting the pylorus at rest, where there is a simple ulcer or fissure existing, a malignant growth, or quite marked stenosis from fibrous stricture, the patient improves, the pathological condition yields to treatment, and complete recovery takes place in a certain number of cases. This applies more particularly to the operation of gastrostomy, in some cases of malignant stricture of the œsophagus, or of fibroid stricture, in a more or less inflammatory condition.

It is not my intention to present many clinical cases, but the following are so interesting and instructive that I wish to here report them for the first time:

Case 1. Mrs. H. H., æt. 56; housewife; native of U. S.; residence, Middleburgh, N. Y. Patient entered the Albany Hospital November 18, 1901; discharged December 16, 1901. Diagnosis, carcinoma of œsophagus. Treatment, gastrostomy. Result, improved.

*Personal history.* Patient complains of inability to take food.

*Family history.* Negative.

*Past history.* Patient always quite well until two or three years ago, at which time she began to suffer from indigestion, and of late has been constipated.

*Present illness.* For past few months patient has had great difficulty in swallowing food. This has grown progressively worse until upon entrance to the hospital only liquids could be taken, and even then caused pain, at times the patient not being able to swallow at all. There had been a steady decrease in weight during past few months. Increase in cachexia and anæmia.

*Physical examination.* Palpitation. Below liver, but not movable by respiration, there is a regularly-shaped mass, not doughy nor tympanitic. Passing œsophageal tubes an obstruction is marked just above the cardiac end of stomach, through which only the smallest bougie passed, giving her much distress. By aspiration 100 cubic centimetres of undigested material was removed from the sac formed above the constriction.

After a careful study of her case, I was led to the conclusion that she undoubtedly had a malignant growth at the lower end of the œsophagus, just above the cardiac end of the stomach, and that the only course to pursue was to establish an artificial opening in the stomach—a gastric fistula—so that after a time she could feed herself, and in this way obtain sufficient nourishment to afford comfort. She was strong enough to bear the operation, and on November 27, 1901, I made an incision parallel with the ribs, on the left side, and just to the left of the median line, bringing the anterior wall of the stomach, which was somewhat contracted, into the incision. Then I made an opening in the stomach, large enough to admit the largest-sized rubber catheter, folded the walls of the stomach over this, attached the anterior wall of the stomach to the under surface of the abdomen, and to the sides of the incision, and fed her through this tube. Patient was comfortable after the operation, no untoward symptoms, took considerable food, but did not gain in strength and on December 12, 1901, I wrote Dr. Rossman, her family physician, as follows:  
*My dear doctor:*

I do not feel quite happy over the condition of Mrs. H. There is a steady, continuous contraction of the stomach going on, the growth is certainly increasing, and we are not able to sustain her as well as I could wish. She is in very good condition to be moved, and, perhaps, if they are to get her home, it should be done within the week. The case is proving more serious than at first indicated.

She was accordingly moved from the hospital to her own home in

Middleburgh, December 16, 1901. To my great surprise, I received the following letters from her husband:

*December 31, 1901.* Mrs. H. is improving nicely; sits up in a chair two or three times a day, etc., etc.

*January 8, 1902.* Mrs. H. is still improving; has become hungry, wishes for something to eat; almost impossible to control her. She is taking liquid through her mouth; can take a tumblerful of milk, also a dish of ice cream. Has eaten a half slice of bread and butter, that she secured from the nurse when I was away from home, etc., etc.

*February 3, 1902.* Mrs. H. is still improving; can eat like a pig, and almost impossible to control her appetite. She can take three meals through the mouth of solid food, and retain same. There are times, however, when she has a choking in her throat, just about the location of Adam's apple. She thinks the stricture has traveled back to the throat.

The patient continued in about the same condition and came to my office September 3, 1902, presenting the following condition: Had gained fifteen pounds in weight, was much stronger and took a normal amount of nourishment, mostly in the form of liquids. Tube still in position only being taken out to be properly cleansed. Part of food is taken through the tube, part per mouth. In every respect Mrs. H. is greatly improved. Bowels are regular, and the mass does not seem to have enlarged any.

The operation for opening the stomach, for treatment of fibrous strictures of the œsophagus is one of the best surgical procedures we are called to perform. I am satisfied that much good is to result, and life will be prolonged a greater number of years, in the sum total, by the conservative operations we do upon the stomach, than in the too radical ones.

The operation of gastrectomy, while brilliant in many respects, and reflecting credit upon the operator, can be applied to exceedingly few cases. Although the results have been studied carefully, yet it is a question whether some of these cases would not have lived longer, and been more comfortable, had one of the modified operations been done. However, when one opens the abdominal cavity, and though prepared to do a certain operation upon the stomach, he sometimes finds the condition such that gastrectomy seems preferable. It is so comforting to the patient and friends to know that the malignant growth has been completely removed, that this in itself is, at times, an incentive to the surgeon to do his utmost in relieving the sufferer.

The following case will illustrate these remarks somewhat:

Mrs. B. S., æt. 42; married; housewife; residence, Albany. N. Y. Entered Albany Hospital February 12, 1900.

*Present illness.* Over a year ago, when eating solid food, would afterwards vomit, but liquids produced no distress, nor did she have any pain.



During past year no solid food of any kind taken. Occasionally would vomit while on a strictly liquid diet—not much in quantity. Patient lived mostly on a milk diet. For past two months noticed a bunch in left side, which gradually increased. A tumor, lobulated, size of patient's fist, just above umbilicus, a little to the left of median line, could easily be made out.

*Past history.* Good. Six children, four living, no miscarriages, menstruation regular.

*Family history.* Four brothers and four sisters alive and well. No history of malignancy or tuberculosis. Patient in hospital for observation until operation, and vomiting more or less continuously. Diagnosis, carcinoma of stomach, omentum and probably involving the transverse colon. Patient and husband readily consented to an exploratory incision. If the diseased mass could be removed successfully we were to proceed with the operation. Previous to the operation one grain of calomel, in divided doses, had been given, followed by two A. S. and B. pills, which produced a good movement of the bowels. Usual intestinal enemata. Pulse previous to operation never above 100, with slightly increased respiration, and temperature normal. Patient somewhat restless the night before the operation.

*Operation,* February 20, 1900. Gastrectomy. Median incision between ensiform cartilage and umbilicus. A hard mass occupying the greater curvature of the stomach and cardiac end found, also a few adhesions, but neighboring glands not infiltrated. Omentum ligated in sections, stomach loosened from all attachments, duodenum and pyloric end of stomach grasped with forceps, section made well below tumor, and stomach gradually worked out of its bed up to cardiac end, cardiac end of œsophagus grasped, stomach removed, duodenum joined to the end of œsophagus by means of a medium-sized Murphy button, and very little blood lost during the entire operation. There was considerable tension and the œsophagus was loosened by lateral incision of the diaphragm. Wound closed in usual manner. Anæsthetic fairly well taken, and operation lasted one and one-half hours. Returning from operating room patient was cold, with uncomfortable perspiration over surface of body, but this was relieved by proper treatment. Pulse 126. She had difficulty in breathing, not being able to take a full inspiration. At 5 p. m. had reacted well, much warmer and pulse of good volume. She complained of pain through abdomen and was turned on her side, with a pillow firmly applied to back. Rectal enemata well retained. One-thirtieth grain of strychnia continued every three hours hypodermatically. Patient slept at intervals, feeling quite comfortable, pulse at 10:45 p. m. 118, with good volume, and she was very quiet. At 11 p. m. she voided four ounces of urine. At 11:30 p. m. she had a sharp pain in right side of abdomen, and at her earnest desire position was changed, when she felt much more comfortable. At 1 a. m. belched up a little gas. No nourishment allowed, but mouth rinsed frequently. At 1:10 a. m., after sleeping ten minutes, awakened with a sudden start, giving herself a severe movement of the body, and from that time on her pulse grew weaker, more rapid, and while all possible remedies were employed the patient grew worse, and died at 3:20 a. m.

*Post-mortem examination* showed that the attachment between the duodenum and œsophagus had loosened, the upper segment of the Murphy button having separated in its attachment to the œsophagus, and allowing the small amount of fluid contents present to escape into the peritoneal cavity.

The following is the report from the Bender Laboratory: Specimen consists of all the stomach except a small portion of the lesser curvature in the pyloric region. It extends as far as the œsophageal orifice on the one hand and to the edge of the incision on the other. Specimen removed measures sixty-three centimetres in length, eight centimetres from the superior to the inferior curvature. The walls feel very much thickened, are hard, and the peritoneum along the entire lesser curvature is infiltrated with growth which gives it a rough appearance. On opening the stomach fully three-fourths of the mucous membrane and walls of the stomach are involved in a new growth. This new growth in the region of the lesser curvature, shows rather extensive ulceration. The growth in places is distinctly nodular and has an overhanging edge in the region of the lesser curvature. The growth is of a very fibrous character. The mucous membrane of the pyloric portion of the stomach is somewhat congested—is otherwise normal. The stomach wall in places is as much as three and one-fourth centimetres in thickness. The wall of the stomach in the uninvolved portion measures four millimetres and the rugæ is well marked. In the involved portion they are almost entirely absent. There is a small portion of the omentum attached to the stomach, which contains a number of enlarged, hard glands, many of them as much as one centimetre in diameter, and all of them showing extensive carcinomatous involvement. There are also some glands in the region of the lesser curvature which show extensive involvement.

On section the superficial portions of the growth are spongy and cellular. The deeper portions show considerable fibrous tissue penetrating the cellular areas, and the growth can be seen extending deep down into the muscle.

Accompanying the specimen there is a portion of a transverse colon, twenty centimetres in length, attached to which is a considerable piece of the greater omentum. The peritoneum of the colon is of normal appearance. The mucous membrane is also normal, as are the walls. The omentum presents a few hard, nodular areas which appear to contain a carcinomatous growth.

*Anatomical diagnosis.* Medullary carcinoma of the stomach. Extensive involvement of the lymphatic glands, associated with nodular growth in the omentum. Normal transverse colon.

*Microscopic.* The growth in the stomach is rather diffuse and is associated with a considerable connective tissue increase. It is alveolar in character and consists of small alveoli, filled with cells of an epithelial type and surrounded by a moderately extensive cellular connective tissue stroma. Section of the transverse colon is normal. The lymph glands adjacent to the growth show involvement in the process.

*Diagnosis.* Carcinoma simplex of the stomach. Metastases to the neighboring lymph glands.

This case is one in which had I been contented to do a simple gastrostomy I would have undoubtedly prolonged the life of my patient, and given her greater comfort, not attempting to remove a growth that extended up so close to the diaphragm, and which implicated the cardiac end of the œsophagus, as afterward shown.

Such are the practical results of careful study of cases, and which every surgeon should consider in repeating operations of this nature.

The next case is one in which the condition was plainly clear, and the indications for a complete operation much more favorable.

Case III. Transferred from medical side by Drs. Ward and Neuman.

Mr. H. M., æt. 55; native of Canada; blacksmith by occupation; residence, Turner's Falls, Mass.

Patient entered the Albany Hospital January 1, 1902. Diagnosis, sarcoma of stomach. Operation, gastrectomy. Result, recovery.

*Family history.* Parents' death occurred at advanced ages—mother of heavy cold, father of pneumonia. One sister and two brothers living and well. One brother died, æt. 28, from inflammation of bowels; one brother, æt. 35, from disease contracted from a horse—probably actinomycosis.

*Previous history.* Uneventful with exception of pleurisy in 1873, and occasional attacks of vomiting since 1877. Patient presented a hernia, which developed in 1883, and for which he has since worn a truss. Uses tobacco very freely, also a pretty moderate amount of whiskey and beer. Is a hearty eater. Bowels always regular.

*Present illness* began October, 1900. Pain in epigastrium, more marked between four and five p. m., vomiting any time during the day, and which usually relieved pain. Burning sensation after vomiting, with considerable eructation of gas. Appetite poor since onset of trouble. Vomitus tastes bitter and disagreeable. Bowels constipated; no bladder symptoms. Chilly sensation occasionally at night; no cough, shortness of breath, or night sweats. Has lost about forty-four pounds in weight, and much in strength. Spits blood occasionally since pleurisy, more especially since present trouble began. Vision and hearing poor, but general sensations normal.

Examination revealed breathing harsh at apices, with prolonged expiration, heart dulness beginning at upper border of fourth rib, limited externally by nipple line, internally by left sternal border, first sound at apex extremely loud and second aortic sound exaggerated.

*Abdomen.* Oval, symmetrical, respiratory movements transmitted; percussion note tympanitic; tenderness in epigastrium; muscular resistance all over upper half of abdomen. Reflexes normal.

Gastrointestinal anastomosis suggested, to which patient readily consented, being desirous of obtaining even temporary relief if possible.

*Operation, January 4, 1902.* Usual anæsthetic and incision. Entire stomach, which was quite movable, with the exception of about an inch at cardiac extremity, found involved, also surrounding glands. Gastrectomy

thought advisable and carried out. Mesentery tied off with fine silk; stomach clamps applied, and after thoroughly walling off surrounding parts with tampons, stomach was excised at about two inches anteriorly, and three inches posteriorly from the cardiac end, just below the pylorus. Posterior and all involved glands thoroughly removed. Cut ends brought together, sutured with silk sutures, and all raw edges invaginated by peritoneum.

Wound closed in usual manner, one vaginal iodoform gauze tampon left in for drainage, and standard dressings. Anæsthetic well taken, and operation lasted one and one-half hours.

After operation patient at times was restless, weak, highest temperature 102, pulse 126, but he responded well to treatment, and went on to uneventful, complete recovery, the only complication being delirium for a short time after the tenth day, and a stitch-hole abscess. After treatment consisted in giving nothing per mouth for forty-eight hours, although he was occasionally allowed to rinse out his mouth with hot water. At the end of forty-eight hours the dressings were removed and found somewhat stained from drainage from the peritoneal cavity. Part of iodoform gauze drainage removed, and the balance at the end of the fifth day. No unusual treatment called for.

Bender Hygienic Laboratory pathological report, by Dr. Blumer, as follows: The specimen appears to consist of a portion of the stomach wall, the pylorus and a portion of the duodenum. To the specimen is attached a portion of the greater omentum, measuring 13 x 5 centimetres. The entire specimen measures about 20 x 12 x 2 centimetres. The tissues of the stomach wall are the seat of a new growth, which is about one centimetre in thickness. It is thought that the pylorus is included in this specimen on account of the fact that there appears to be a ring of fibrous tissue about which the different portions of the growth are grouped. They have an appearance as though puckered, the apices of the fold centering about this ring. The mucous membrane is for the most part pale, and has a slimy appearance. The inner surface of the growth is slightly granular in appearance, and shows a few reddish hemorrhagic points. On section the growth is found to be firm and homogeneous—pearly white in color. The serous coat of the stomach appears normal.

*Anatomical diagnosis.* Carcinoma of the stomach in the region of the pylorus.

*Microscopical examination.* The wall of the stomach seems to be infiltrated by a new growth, which in places has completely destroyed the mucosa which penetrates into the musculature and reaches in some places almost to the serosa. This growth is made up of closely packed cells, which are in the main rounded in shape. The cells are rather large for a tumor of this type, and have a vesicular nucleus and a moderate amount of protoplasm. Many of them show karyokinetic changes. Some of the cells are much larger than the others, and have irregular blood nuclei. A fair number of polynuclear leucocytes are present. There is no alveolar arrangement in the neoplasm. The tumor cells are held together by a small amount of fine connective tissue, and by the remains of the tissues of the stomach walls. The tumor is quite vascular, containing a good many



thin, new formed blood vessels. The peritoneal surface of the stomach shows in one or two places distinct thickening, due to the formation of dense fibrous adhesions.

*Revised diagnosis.* Round celled sarcoma of the stomach with chronic perigastritis.

Dr. Houle, the attending physician, has kept me well posted regarding Mr. M.'s progress, and patient presented for exhibition at the meeting of the American Surgical Association, Albany, N. Y., June 4, 1902, with the following history: Appetite excellent, bowels in good condition, wound thoroughly healed, patient able to eat any kind of food and in increased quantity. He has gained over thirty-one pounds in weight.

*September 13, 1902,* his physician writes that on August 1st, Mr. M. purchased a blacksmith shop, is able to work at the anvil, and apparently in full health.

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## THERAPEUTIC EFFECTS OF ROENTGEN RAYS ON MALIGNANT GROWTH; REPORT OF CASES.

By ARTHUR F. HOLDING, M. D.,

Ex-Resident Surgeon and Skiagrapher to Albany Hospital.

Having several inoperable cases of malignant tumors referred to me for therapeutic treatment by means of Roentgen Rays and, being sceptical of their value for this purpose, I determined to report results of the experiment whether favorable or not.

*Case 1.*—B. K., male, aged 47. Twenty months ago, first noticed sore on edge of lip. He thought it was a cold sore. It continued to grow larger, and he had occasional darting, stinging pain in the lip. Seventeen months ago he consulted a physician and caustics were applied without benefit. In December, 1901, he was referred to Dr. A. Vander Veer, who confirmed the diagnosis of epithelioma. At that time the tumor involved the entire lower lip, which was a large, everted, luxuriantly fungating mass of granulations, firmly adherent to the jaw bone and measuring 10 x 10 x 4 centimetres, extending 2½ centimetres beyond the angles of the mouth on either side and downward below lower border of mandible. The teeth of the lower jaw were plainly visible. The edges of the lesion were hard, and the surface was uneven and greyish-red in color with sero-purulent nauseous exudation. There was a continuous drooling of saliva. A few small movable metastases to cervical lymph glands were palpable. His general condition was good.

He was advised to have a preliminary operation to remove as much of the cancerous mass as possible, to be followed by Roentgen ray treatment. Operation was refused and treatment by Roentgen rays began.

After nine sittings the tumor showed slight improvement. The patient was again urged to submit to an operation and he returned home to make the necessary business arrangements. On his return five days later, he said that while absent a large piece of the tumor had fallen out. On examination the center of tumor showed decided loss of substance and instead of being exuberant, rolling and everted, the edges were undermined and inverted with a cleaner and healthier appearance. Patient expressed confidence in the Roentgen rays and again refused operation. Treatments were continued. Lateral masses of exuberant tissue gradually increased, exudation continued, pain increased, metastases apparently unchanged and cachexia developed.

On January 9, 1902, the tumor measured  $5 \times 2\frac{1}{2} \times 3$  centimetres. The cutaneous edge at the center was undermined, and the floor of the ulcer presented a worm-eaten, irregular appearance. Lateral masses of epithelioma were slightly larger, metastases apparently unchanged. Odor much improved. Patient again urged and agreed to have operation, but left hospital a day previous to operation.

*Case II.*—Mrs. L. K., aged 59 years. Two years ago she noticed a sore spot in the right breast within and below nipple. A few months later she noted a small nodule at the same site. This gradually grew, extending toward the nipple. Anodyne applications were applied without benefit. In November, 1900, the tumor was as large as a horse chestnut and similar in consistence. Amputation of the breast was done at that time for carcinoma, but the axillary contents were evidently not removed. The patient made good recovery from operation.

In October, 1900, she consulted her physician concerning some nodules in the axilla. He found several reddened foci in the scar and metastases in the axillary glands. Subsequently the reddened foci coalesced, assuming an indurated nodular character, being covered with granulation tissue. Ointments and washes were used without benefit. The patient lost weight and strength and was then referred to Dr. A. Vander Veer, who made a diagnosis of recurrent carcinoma of the breast with axillary metastases. On examination at that time there presented a scar from amputation of right breast running parallel to and four centimetres above the lower border of the pectoralis major muscle. Numerous elevated, indurated, scab-covered, easily bleeding, granulating nodules were present in the scar throughout its entire length, also extending out laterally varying in width from two to eight centimetres. The nodules are adherent to ribs. The adjacent skin was indurated, brawny and adherent. Small lumps were palpable. In the axilla there were several pea to almond-sized nodules. Patient is small, nervous, poorly developed and nourished, extremely anxious and worried. I was unable to obtain specimen for microscopical examination. Twelve treatments were given when a slight dermatitis developed. The rays were discontinued for a week and again resumed. Patient was discharged March 10, 1902, at which time no

nodules could be felt over the right chest nor in right axilla. No recurrence has taken place since and she is apparently cured.

*Case III.*—J. O., male, aged 68 years. Seven or eight years ago a papule appeared just below the lobules of left ear. It occasionally had a slight itching feeling and gradually grew. Two years ago it was  $2\frac{1}{2}$  centimetres in diameter and healed under local treatment. Following an attack of erysipelas, one year later, the papule again broke down and grew rapidly. Local treatment with ointments failed to improve it. The patient grew rapidly worse and the disease resisted all treatment. The patient was referred to Dr. A. Vander Veer, who advised him to enter the Albany Hospital and take X-ray treatments. A microscopical diagnosis of epithelioma was made by Dr. George Blumer. On examination, patient presented in front of and below the left ear a lesion triangular in shape with base downward. The floor of ulceration is granular and reddish. There was no pain; some slight sero-purulent secretion, without odor. The edges were elevated and at inferior posterior angle, slightly everted. The lobule of the ear was completely severed from its lateral attachments and hung from the cartilage. The area of lesion was  $7 \times 4 \times 3$  centimetres. Under Roentgen rays the ulceration became more regular and healthy in appearance. The edges became level with the skin. Later the area became smaller and a few islands of skin formed, grew and finally covered the surface with smooth thin skin. A dermatitis developed and the beard, where exposed to rays, fell out. The epithelioma evidently gave place to healthy granulation tissue. Patient went home to await subsidence of dermatitis. Subsequently, creosote was applied, which destroyed the newly formed skin. Patient did not return for further treatment.

*Case IV.*—E. C. L., female; aged 46 years. Her sister had carcinoma of the breasts. In September, 1900, she noticed a small enlargement in the left breast which was occasionally painful. It grew rapidly to the size of a hen's egg, became adherent to the skin and was accompanied by some enlargement of the axillary glands. Amputation of the breast and removal of the axillary glands was performed by Dr. A. Vander Veer. *Microscopical diagnosis:* Carcinoma of the breast with metastases to axillary glands, made by Dr. George Blumer. The tumor recurred and the patient again consulted Dr. Vander Veer in March, 1902. At that time she presented metastasis in the neck above the clavicle, the liver was enlarged and nodular, extending below the free edge of the ribs. This case was recognized as plainly inoperable and probably the patient already had a condition of carcinomatosis. She was referred to me for Roentgen ray treatment of the breast, March 4, 1902. Four recurrent masses presented,—one over sternum, attached to the bone and very painful ( $6 \times 4$  centimetres), one in the scar ( $8 \times 6$  centimetres), two metastatic nodules, one in the left axilla ( $7\frac{1}{2} \times 2\frac{1}{2}$  centimetres) and one above the clavicle ( $2\frac{1}{2} \times 2\frac{1}{2}$  centimetres).

The patient was given twelve sittings, during which the mass over sternum and the pain disappeared. The other nodules measured respectively  $2\frac{1}{2} \times 2\frac{3}{4}$  centimetres,  $7 \times 6$  centimetres and  $2 \times 2$  centimetres. All were considerably softer in consistence and much less elevated. The

skin presented congestion where exposed to the rays. There was some tenderness in the nodules on palpation. At this time the patient had two epileptic convulsions and it was thought advisable to cease treatment. She gave no previous history of convulsions and these seizures were not of the Jacksonian type.

Other cases of malignant tumors are now improving under Roentgen irradiation.

In considering this new therapeutic measure it is instructive to note the large number of authentic and favorable results already recorded, many of them by prominent members of the profession. I submit a brief summary of cases in the literature:

OBSERVER	DIAGNOSIS	RESULT
1 Startin .....	Rodent ulcer .....	Apparently cured.
2 Startin .....	Rodent ulcer .....	Apparently cured.
3 Startin .....	Rodent ulcer .....	Apparently cured.
4 Low .....	Rodent ulcer .....	Marvelous cure.
5 Despeignes .....	Carcinoma gastric .....	Improved, <i>i. e.</i> , size of tumor and pain. Jaundice disappeared. Cachexia apparently checked.
6 Gocht .....	Carcinoma mammæ. }	Both cases too far advanced to cure. The rays relieved pain and made their end more comfortable.
7 Gocht .....	Carcinoma mammæ. }	
8 Chamberlain .....	Epithelioma face .....	Apparently cured.
9 Chamberlain .....	Epithelioma face .....	Apparently cured.
10 Chamberlain .....	Carcinoma cervix .....	Remarkably improved.
	(inoperable)	
11 Chamberlain .....	Epithelioma face .....	Improved.
12 Chamberlain .....	Epithelioma face .....	Apparently cured.
13 Chamberlain .....	Carcinoma tongue .....	Improved.
14 Chamberlain .....	Epithelioma lip .....	Improved.
15 Chamberlain .....	Epithelioma face .....	Improved.
16 Chamberlain .....	Epithelioma face .....	Apparently cured.
17 Chamberlain .....	Epithelioma face .....	Apparently cured.
18 Chamberlain .....	Epithelioma face .....	Improved. Dead.
19 Chamberlain .....	*Carcinoma .....	Apparently cured.
20 Chamberlain .....	Epithelioma face .....	Apparently cured.
21 Johnson and Merrill, Washington, D. C.	Epithelioma face.... }	Improved—an occasional recurrence has to be treated. It yields to the rays.
22 Johnson and Merrill,*	Epithelioma face.... }	

\* Diagnosis confirmed by microscopic examination  
 1 Philadelphia Medical Journal, Dec. 8, 1900



OBSERVER	DIAGNOSIS	RESULT
23 Johnson and Merrill,	Carcinoma mammæ....	Improved.
24 Johnson and Merrill,*	Carcinoma mammæ....	Apparently cured.
25 Johnson and Merrill,	Epitheloma .....	Apparently cured.
26 <sup>I</sup> Clarke, (London)..	Carcinoma mammæ with axillary metastases...	Greatly improved.
27 Hopkins .....	Carcinoma uteri, inop- erable .....	"Considerable success."
28 Hopkins .....	Carcinoma mammæ, in- operable .....	"Considerable success."
29 Hopkins .....	Carcinoma gastric, in- operable .....	"Considerable success."
30 Hopkins .....	Carcinoma tongue, in- operable .....	"Considerable success."
31 <sup>II</sup> Hopkins.....	Carcinoma mammæ ...	Apparently cured.
32 Blackmarr .....	†Carcinoma face.....	Practically cured. Oc- casional slight recur- rence which disappears on renewing treat- ment.
33 <sup>III</sup> Williams (Boston)..	Epidermoid cancer face	Apparently cured.
34 Williams .....	Epidermoid cancer face	Improved.
35 Williams .....	Epidermoid cancer face	Apparently cured.
36 Williams .....	*Epithelioma hand.....	Improved.

Dr. Williams later reported before the New York Academy of Medicine that he had successfully treated epithelioma, rodent ulcer, carcinoma, papiloma, spindle-celled sarcoma, keratosis, inflammatory new growths by use of Roentgen rays. He further stated that every case that came early enough was either healing or improving.

37-81 <sup>IV</sup> Sequeira (Lon- don).....	45 cases of inoperable *Rodent ulcer.....	"Healing."
82 Stembeck (St'kholm)	Rodent ulcer.....	Apparently cured.
83 <sup>V</sup> Pfahler (Phil. Hosp.)†	Carcinoma inoperable..	"Healing."
84 Pfahler .....	†Epithelioma .....	"Healing."
85 Pfahler .....	†Epithelioma .....	Apparently cured.
86 Pfahler .....	†*Epithelioma.....	Apparently cured.
87 Jamieson .....	Carcinoma .....	Improved.
88 Jamieson .....	Carcinoma .....	Improved.
89 Ferguson .....	Carcinoma recurrent...	Apparently cured.
90 Ferguson .....	Rodent ulcer .....	

\* Diagnosis confirmed by microscopical examination.

† Diagnosis confirmed by consultants.

<sup>I</sup> *British Medical Journal*, Jan. 9, 1901.

<sup>II</sup> *Philadelphia Medical Journal*, Sep't 7, 1901.

<sup>III</sup> *The Roentgen Rays in Medicine and Surgery*.

<sup>IV</sup> *British Medical Journal*, February 8, 1901.

<sup>V</sup> *Therapeutic Gazette*, March 1902.

OBSERVER	DIAGNOSIS	RESULT
91 <sup>1</sup> Beck.....	*Sarcoma .....	Improved, later died.
92 Allen .....	Epithelioma recurrent..	Apparently cured.
93 Allen .....	Epithelioma recurrent..	Apparently cured.
94 Allen .....	Epithelioma recurrent..	Apparently cured.
95 Allen .....	Epithelioma recurrent..	Apparently cured.
96 Allen .....	Epithelioma recurrent..	Apparently cured.
97 Allen .....	Rodent ulcer.....	Apparently cured.
98 <sup>11</sup> Pusey (Chicago) ..	*†Sarcoma (round celled)	Apparently cured.
99 Pusey.....	*†Osteosarcoma .....	Relieved pain, treated too late.
100 Pusey .....	*†Sarcoma .....	
101 Pusey .....	*vEpithelioma.....	Apparently cured.
102 Pusey .....	Epithelioma recurrent inoperable .....	Apparently cured.
103 Pusey .....	*Epithelioma .....	Apparently cured.
104 Pusey .....	Epithelioma .....	Apparently cured.
105 Pusey .....	*Epithelioma .....	Apparently cured.
106 Pusey .....	†*Epithelioma recurrent.	Apparently cured.
107 Pusey .....	Rodent ulcer.....	Apparently cured.
108 Pusey .....	†*Epithelioma recurrent inoperable .....	Apparently cured.
109 Pusey .....	†Carcinoma mammae re- current inoperable...	Apparently cured.
110 Pusey .....	Carcinoma mammae re- current inoperable...	Apparently cured.
111 Pusey .....	†Carcinoma mammae re- current inoperable...	Apparently cured.
112 Pusey .....	Carcinoma mammae in- operable .....	Unimproved. Not treat- ed long enough.
113 Pusey .....	Carcinoma mammae in- operable .....	Unimproved. Not treat- ed long enough.
114 Pusey .....	Carcinoma mammae in- operable .....	Unimproved. Not treat- ed long enough.
115 Pusey .....	†Epithelioma with cervi- cal metastases .....	Unimproved. Not treat- ed long enough.
116 Pusey .....	†Metastatic carcinoma of neck .....	Unimproved. Not treat- ed long enough.
117 Pusey .....	†Carcinoma .....	Carcinoma improved. Dead.

\* Diagnosis confirmed by microscopical examination.

† Diagnosis confirmed by consultants.

<sup>1</sup> *The New York Medical Journal*, November 16, 1901.  
*Chicago Medical Record*, April, 1901.

OBSERVER	DIAGNOSIS	RESULT
118 Pusey	†Carcinoma	Improved. Treatment ceased.
119 Pusey	†Epithelioma metastatic.	Unimproved.
120 Pusey	†Carcinoma	Unimproved.
121 Pusey	†Carcinoma, deep abdominal	Unimproved.
122 Pusey	†Carcinoma, deep abdominal	Unimproved.
123 Pusey	†Carcinoma, deep abdominal	Unimproved.
124 Pusey	†Carcinoma, deep abdominal	Unimproved.
125 Pusey	†Carcinoma, deep abdominal	Unimproved.
126 I Rinehart	Epithelioma face	Apparently cured.
127 Rinehart	Rodent ulcer	Apparently cured.
128 II Morton (New York)	Sarcoma (round celled?)	Apparently cured.
129 Morton	Carcinoma mammæ, inoperable, recurrent	Improving.
130 Morton	Carcinoma mammæ	Improving.
131 Morton	Carcinoma mammæ, recurrent	Improving.
132 Morton	Carcinoma gastric	Improving.
133 Morton	Sarcoma head	Improving.
134 Morton	*Epithelioma	Improving.
135 Morton	*Carcinoma mammæ, inoperable recurrent	Apparently cured.
136 Johnson, New York	Carcinoma mammæ	Apparently cured.
137 Johnson	Carcinoma jaw	"Undoubtedly improved."
138 Johnson	Epithelioma ear	"Undoubtedly improved."
139 Gilman, Chicago	Carcinoma mammæ	Apparently cured.
140 Skinner, New Haven	Carcinoma mammæ	Apparently cured.
141 III Fiske, Brooklyn	*Sarcoma, round celled (had had 5 previous operations and toxin treatment)	"Remarkably improved."
142 Coley, New York	*Sarcoma (round cell)	Case too far advanced. Died.
143 Coley	*Sarcoma (spindle cell)	Improved.
144 Coley	Sarcoma	Unimproved.

\* Diagnosis confirmed by microscopical examination.

† Diagnosis confirmed by consultants.

I *Philadelphia Medical Journal*, February 1, 1902.

II *New York Medical Record*, March 8, 1902.

III Reported to New York Academy of Medicine, March 6, 1902.

OBSERVER	DIAGNOSIS	RESULT
145 Coley. ....	Lymphosarcoma .....	Improved marvelously.
146 Turnure .....	†Epithelioma .....	Apparently cured.
147 (Roosevelt Hosp'l, N. Y.) Turnure.....	*Epithelioma face.....	Apparently cured. Reported poor results in treating carcinomata.
148 Addyman (St. George's Hos- pital), London...	Carcinoma .....	Apparently cured. Apparently cured..... 32 per cent. Improved ..... 58 per cent. Unimproved ..... 10 per cent.

Space will not permit a general discussion of each of these cases. All are recorded as presenting typical clinical symptoms. If any are sceptical as to diagnosis, I feel that they will be convinced clinically if they will but take the trouble to read the original articles as cited above.

In tabulating these cases I have considered that not enough time had elapsed to warrant any result being called a positive cure, preferring to use the term "apparently cured." Doubtless nearly all cases have had diagnoses confirmed by consultants and a larger number of the diagnoses have been verified by microscopical examination, but unless I have found it explicitly so stated I did not tabulate it as such. As most of the improved cases are continuing treatment, some of them may later be placed in the "apparently cured" list.

There have been such uniformly good results reported from Roentgen-ray therapeutics that I believe there is some danger if its raising too sanguine hopes. There are probably unsuccessful cases which are not reported, and therefore I think it the duty of workers in this line who have had unsuccessful cases, or who have not been successful, to report such results. A microscopical diagnosis at the beginning, and repeated during treatment, must be made to convince and to properly study cases.

At the last convention of the American Surgical Association, the therapeutic value of the Roentgen ray in malignant disease was discussed, This treatment in inoperable cases was

\* Diagnosis confirmed by microscopical diagnosis.

† Diagnosis confirmed by consultants.



indorsed by such eminent surgeons as Bevan (Chicago), Richardson (Boston), Vander Veer (Albany), Coley (New York), Ochsner (Chicago). At that time it was stated that any one who disputed the value of the Roentgen rays in such cases was either "ignorant of the subject or grossly bigoted."

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## Editorial

"— Went to the hospital of La Charité. Saw Lænnec, with his pupils, visiting the patients. He makes great use of the stethoscope, which is a wooden tube applied to the body, and put to the ear: by the sound the state of the lungs and the vital organs is ascertained. It is like a telescope, by which the interior of the body is perceived, only that the ear is used instead of the eye. It is deemed a great improvement. Lænnec is the inventor, and has high reputation in the treatment of diseases of the chest. He has learned to ascertain the condition of the lungs by thumping on the breast and back of the patient, and putting the ear to the body at the same time. He is a little man, five feet three inches high, and thin as a shadow. However, he has acute features, and a manner which bespeaks energy and consciousness of power.

"The whole hospital was neat and clean; bedsteads of iron. French medical practice very light; few medicines given; nursing is a great part of the treatment. Lænnec's pupils followed him from patient to patient. He conversed with them in Latin."

S. G. GOODRICH (PETER PARLEY)

*Recollections of a Lifetime.*

Ne Pereat  
Populus Scientia  
Absente.

Although veterinarians have been using tuberculin for a number of years for the purpose of diagnosing tuberculosis in cattle, the use of tuberculin in the human subject does not seem to have been generally adopted by the profession. There are undoubtedly reasons for this, some of which are discussed by Pickert in a recent article.

Pickert's idea is that there are two main reasons why tuberculin is not more commonly used. One of these is that when the use of tuberculin was first introduced it seemed to accelerate the progress of tuberculosis in some instances. The second factor, which has prevented the more general use of the reagent, is the undoubted fact that occasionally non-tuberculous cases give a reaction. Both of these objections can be largely obviated. The unfortunate cases in which the disease was unfavorable affected

by the administration of tuberculin occurred at a time when very large doses of this substance were used. The occurrence of a reaction in non-tuberculous cases, while it occasionally takes place, can be largely obviated if the dosage is properly regulated. Considering the fact that in sanatoria for tuberculous patients tubercle bacilli are lacking in the expectoration in 50 to 68 per cent. of the cases, and that furthermore the physical signs are often exceedingly difficult of interpretation, it would seem that there exists an actual demand for the more extended use of tuberculin.

The matter has recently been studied in this country by Madison, who administered the test to over five hundred patients in the Danvers Hospital for the Insane. This observer found that occasionally a reaction to tuberculin occurred when the autopsy showed no tuberculosis. He also found that cases of completely healed tuberculosis reacted at times. On the other hand some cases of tuberculosis failed to react, though these were usually cases in the last stages of the disease.

The conclusions of Pickert differ somewhat from those of Madison as regard the dose of tuberculin to be administered. Pickert recommends beginning with a very small dose, not more than half a milligramme, and gradually increasing it if the reaction takes place at first. Madison believes in administering at least four milligrammes to begin with, and later sometimes uses as much as ten milligrammes. Small increasing doses according to this observer are to be avoided. The subject is one which is worthy of careful consideration by the profession, and in view of the relative harmlessness of the proceeding it is to be hoped that this form of diagnosis will come into more general use.

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## State Medicine

Edited by Henry L. K. Shaw, M. D.

### IMPORTANT MEDICAL BILLS IN THE NEW YORK LEGISLATURE

A large number of bills which may be of interest to members of the medical profession are introduced each year in the Legislature of the State of New York. The ANNALS has briefly commented on the most important measures for some years past, and will continue to do so while the present Legislature is in session.

Many of the bills introduced are solely of local interest, and in these cases only the title of the bill will be given. In order to extend its usefulness the ANNALS will send a copy of any bill, report on the progress of any measure, or give the date of a public hearing, to any one who may be interested. We would recommend that the secretaries of the various county medical societies keep watch on legislation which concerns their counties.

The following bills have been introduced up to January 26th:

Senate bill No. 1. An act "To provide for an adequate supply of pure water in cities of over one million inhabitants." Introduced by Mr. McCarren, January 7th, and referred to the Judiciary committee.

This measure only affects Greater New York, and provides for a board of water commissioners, appointed by the mayor, who shall have unlimited power to establish a complete and adequate system for an abundant supply of pure water.

Senate bill No. 8. An act "To legalize a special election of the village of Brockport in relation to the establishment, construction and maintenance of a system of sewers and sewage disposal works." Introduced by Mr. Armstrong, January 7th, and committed to the Judiciary committee.

Senate bill No. 15. An act "For the relief of the Nursery and Child's Hospital, in the city of New York." Introduced by Mr. Elsberg, January 14th, and committed to the committee on Affairs of Cities.

This is simply to permit the hospital authorities to sell or lease some property given to them by the city, and to devote the proceeds of such sale or lease for the maintenance and support of the hospital.

Senate bill No. 24. An act "Making appropriation for the prevention and suppression of infectious and contagious diseases among domestic animals." Introduced by Mr. Ambler, January 14th, advanced to third reading, passed both houses and signed by the Governor, January 23rd.

The bill appropriates ten thousand dollars to pay the expenses incurred in quarantining the State from cattle afflicted with foot and mouth disease. Senator Ambler introduced Senate bill No. 23, giving the Commissioner of Agriculture more authority in the matter of quarantining diseased cattle or cattle believed to have been exposed to an infectious or contagious disease.

Assembly bill No. 132. An act "In relation to the appointment of a coroner's physician and port-mortem examinations in Schenectady county." Introduced by Mr. Wemple, January 20th, and referred to the committee on Internal Affairs.

This bill allows the Board of Supervisors of Schenectady County to choose a physician of good standing and properly qualified to make the post-mortem required by the coroners. The salary is not to exceed five hundred dollars a year. In case the appointed physician shall neglect or refuse to attend an autopsy when so required by the coroner, the coroner can call on some other competent physician, and the bill for his services shall be deducted and kept out from the amount otherwise payable to the appointed coroner's physician.

Senate bill No. 101. An act "For the incorporation of benevolent, charitable, scientific and missionary societies relative to devices and bequests." Introduced by Mr. Grady, January 21st, and referred to the Judiciary committee.

There is a law in existence that makes invalid any bequest in any will which shall not have been made or executed at least two months before the death of the testator. Senator Grady's bill annuls this clause. If it passes, death-bed bequests will become legal. This bill has been introduced in former years and defeated as it deserves to be.

Assembly bill No. 145. An act "To amend a chapter entitled 'An act to incorporate the city of Little Falls.'" Introduced by Mr. Allston, January 21, and referred to the committee on Affairs of Cities.

The object of this bill does not appear in the title. It is to permit the Common Council to make a contract with an incorporated hospital located within the city for the nursing and support of sick or injured poor. The annual sum is not to exceed twelve hundred dollars.

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### In Memoriam

LOUIS CHARRETTE, M. D.

Dr. Louis Charrette, a graduate of the Albany Medical College of the class of 1842, died at Glens Falls, N. Y., December 26, 1902. There were twenty-seven graduates in this class, of whom Dr.



Charrette was the last whose residence was known. In 1902 he sent a short communication to the historian of the Alumni Association. After graduating he practiced for twelve years in Bolton, N. Y., and then removed to Warrensburg, N. Y., where he lived for the remainder of his life. He had served as supervisor and as coroner, but evidently sought no public distinction and during his long life confined himself to the practice of his profession.

ADAM T. VAN VRANKEN, M. D.

Dr. Adam T. Van Vranken, one of the most prominent physicians of Watervliet, N. Y., died at his home in that city, Monday morning, January 19, 1903, after a second attack of cerebral apoplexy. His was fifty-five years of age and was born at Vischer's Ferry, Saratoga County. He received his early education in the district school, at the Fort Edward Collegiate Institute and later entered the Michigan University at Ann Arbor, after which he took up the study of medicine. He graduated from the Albany Medical College in 1874. He moved to Watervliet in 1876, where he began the practice of medicine and soon gained the confidence of the people and was looked upon as a man of ability in his chosen profession. He married Miss Elizabeth Shoemaker, who died in 1886. Three years later he married Miss Emma Harmon, who survives him, together with three daughters of his first wife, Miss Eleanor D., Elizabeth S. and Fanny D. Van Vranken; his mother, Mrs. Dorcas Van Vranken; his sister, Mrs. Gertrude Lansing, and a brother, William D. Van Vranken, of Vischer's Ferry. Dr. Van Vranken was always interested in any movement for the welfare of the city and his public spirit and his broad-minded views gained for him many admirers. He was instrumental in having erected the Y. M. C. A. building in Watervliet, and served as president of the association for many years. He was one of the leading members and an elder of the North Reformed Church, was a member of the New York Medical Association, New York State Medical Society, the Medical Association of Troy and Vicinity, American Medical Association, Colonial Club of Watervliet and of the Holland Society of New York. In 1895 he served as president of the Alumni Association of the Albany Medical College.

## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, DECEMBER, 1902

*Deaths*

	1901	1902		1901	1902
Consumption .....	27	14	Broncho-pneumonia....	4	5
Typhoid Fever .....	1	0	Apoplexy.....	8	9
Diphtheria and Croup.....	5	4	Bright's Disease.....	8	14
Whooping-cough.....	0	2	Accidents and Violence	3	9
Erysipelas.....	0	1	One year and under.....	10	18
Cancer .....	13	9	Seventy years and over.	22	30
Pneumonia.....	11	14			

*Deaths in Institutions*

	1901	1902
Albany City Hospital .....	10	12
Albany Orphan Asylum .....	3	0
Child's Hospital .....	0	1
County House .....	5	3
Home for Aged Men .....	0	1
Homeopathic Hospital .....	1	2
House of Shelter .....	1	1
Little Sisters of the Poor.....	1	0
Public places.....	1	0
St. Peter's Hospital .....	4	2

Total number of deaths for December, 1901, 138; for December, 1902, 139. The death rate for December, 1901, was 15.61; the death rate for December, 1902, is 15.73. Death rate for December, 1900, less non-residents dying in hospitals, 14.93.

Marriages.....	52	Births.....	129
		At term .....	119
		Still .....	8
		Premature .....	2

## WORK OF HEALTH PHYSICIANS

Number of assignments made during the month.....	60
Number of calls made.....	307

## INSPECTIONS

There were 86 markets inspected during the month, and 34 milk peddlers, 3 fish markets, 3 cow stables, 4 milk rooms and 18 inspections were

made of the Public Market. There were found 6 milkmen's violations and 57 pounds of pork and 5 pounds of poultry were condemned.

Twenty-five inspections were made of nuisances complained of, of which 5 were closets, 5 plumbing, 6 water nuisances and 2 chicken nuisances. Ten complaints were found to be without cause and 3 cases were referred to the Commissioner of Public Safety. During the month 28 nuisances were abated and 28 re-inspections were made.

In the plumbing department 136 inspections were made, of which 82 were of old buildings and 54 of new buildings, 23 iron drains, 14 connections street sewer, 18 tile drains, 19 cesspools, 24 wash basins, 20 sinks, 11 bath tubs and 50 tank closets. There were 70 permits issued, of which 64 were for plumbing and 6 for building purposes. Fourteen plans were submitted to the Department, of which 3 were for old buildings and 11 for new buildings. Twelve houses were tested on complaint, of which 6 were the Blue, Red Test and 6 the Peppermint Test. Eighteen houses were examined on complaint and 22 re-examined.

#### BUREAU OF CONTAGIOUS DISEASES

	1901	1902
Typhoid fever reported.....	6	8
Scarlet fever reported.....	2	9
Diphtheria reported .....	51	25
Chickenpox reported .....	8	22
Measles reported .....	11	1
Whooping-cough reported .....	0	3
Consumption reported .....	2	1

Number of days quarantined for diphtheria:

Longest..... 59	Shortest..... 4	Average..... 27
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Number of days quarantined for scarlet fever:

Longest..... 35	Shortest..... 11	Average..... 24
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Number of fumigations:

Houses..... 40	Rooms..... 79
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#### ANTITOXIN

Cases of diphtheria in which antitoxin was used.....	23
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Cases of diphtheria in which antitoxin was not used.....	2
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There were four deaths from diphtheria, the history of the cases being as follows:

One was two years one month old, sick three days. Antitoxin was used six hours before death.

One was two years seven months old, sick two or three days. Antitoxin was not used.

One was seven years three months old, sick six or seven days with what was supposed to be a cold until the last day, when antitoxin was used six hours before death.

One was three years old, sick fourteen days with broncho-pneumonia complicated with membranous croup. The last day or two before death antitoxin was used.

All of the above cases were reported as membranous croup.

#### BENDER LABORATORY REPORT

Cultures for diphtheria:

Initial positive	Initial negative	Release positive	Release negative
11	40	21	37
	Unsatisfactory .....	1	
Total .....			110

### Society Proceedings

#### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held in Alumni Hall, on Wednesday evening, January 14, 1903. The meeting was called to order at 8:45 P. M., the President, Dr. Ward, in the chair. The following members were present: Drs. Archambault, Babcock, Ball, Bendell, Blair, Blumer, Boyd, Carey, Craig, Elting, Hinman, Jenkins, Lanahan, Lempe, Lomax, Macdonald, MacFarlane, Mitchell, Mosher, Richardson, Rooney, Theisen, Traver, Vander Veer, E. A., Ward, Wiltse; as guests, Drs. Adey, Branch, Gorham.

1. *Reading of the minutes of the last meeting.* The minutes were adopted as printed in the ALBANY MEDICAL ANNALS for December, 1902.

2. *Applications for membership.* No names were presented.

3. *Reports and resolutions.* None were made.

4. *Presentation of papers.*

Dr. HARRY W. CAREY read a paper entitled "Report of Two Cases of Testicular Teratomata, with a Review of the Literature."

The PRESIDENT declared Dr. Carey's paper open for discussion.

Dr. BLUMER considered the subject of teratomata in general to be one of the most complicated in human pathology. While Dr. Carey's paper is most exhaustive it is nevertheless almost impossible to entirely clear the subject up. If, for instance, during the process of segmentation of the ovum one of the segmented cells becomes mixed up in the testicle, it is difficult to explain how this develops into the subsequent tumor, and also why this development does not occur until adult life.

Dr. WILTSE believed that the understanding of clinicians was that teratomata are in general congenital, and that they are born with the individual or develop in later life. This idea is certainly supported by some of the authorities. These tumors often arise at the points of fission and are believed to be due to the fact that portions of the tissues are misplaced in the process of fission.

Dr. CAREY, in closing the discussion, said that if the tumors were congenital they would undoubtedly be more frequently observed in organs



removed at autopsy, while, as a matter of fact, they are not. In regard to the fission theory he believed that it would be difficult to explain on this basis the "anlage" of organs found in these tumors, as of the eye, lung, etc.

Dr. JAMES H. MITCHELL read a paper entitled "A Late Laparotomy for Gun Shot Wounds of Intestines; Eleven Perforations; Recovery."

The PRESIDENT declared Dr. Mitchell's paper open for discussion.

Dr. WARD wished to ask when the address of Dr. Eve referred to by Dr. Mitchell was written.

Dr. MITCHELL replied that it was read in 1902.

Dr. ARCHAMBAULT felt that after the well-written and concise description of the case but little was left to be said. A few points may, however, be briefly referred to. 1. It is to be noted that although the shot was fired at close range the skin was not scratched and the wound was clean cut. 2. There was no evidence of clothing carried by the bullet. 3. The bullet did not perforate the layer of the abdominal wall in a direct line, but obliquely, which was to be explained by the inclined position assumed by the boy when the shot was fired. This indicated the futility of probing such wounds. 4. It was an interesting fact, that the case escaped septic infection after such extensive lesions of the intestines. The fluid in the abdominal cavity was probably not infectious to any great degree, which was probably due to the fact that the small intestines were the seat of the perforations, and furthermore to the fact that the small intestines were filled with coarse undigested food which would not readily escape through the small wounds. 5. The resistance of the bowels due to their fullness probably explains the multiplicity of the perforations. 6. In view of the multiplicity of the perforations and the low vitality of the intestinal wall the recovery was most satisfactory. Had the patient's condition been better more care might have been taken in closing the perforations and in matters of technique, which might have prevented the subsequent fecal fistula. 7. The abdominal cavity was drained with strips of iodoform gauze placed in different directions and this method, in the speaker's experience, had frequently been of the greatest value. 8. The state of profound collapse of the patient when he left the table, and for forty-eight hours subsequently, indicated the value of good nursing and vigorous stimulation, with saline solution, etc. 9. The bullet was not found and may be of interest for subsequent X-ray exploration.

Dr. WARD said this case suggested a very different one seen by him many years ago. In 1878 he was called by Dr. Haskins to the Albany Penitentiary to see Tom Ballard, the famous engraver, who was serving a sentence in that institution. He found the floor of the cell occupied by Ballard covered with blood and on the mattress lay the patient extremely pale and with practically no radial pulse. The abdominal wall presented a wound which extended from the ensiform cartilage to the pubis, which had been made by a knife fashioned out of the steel support of a shoe. He had also tried to cut the carotid artery, but had failed. He had succeeded, however, in cutting the brachial artery, and from this came the profuse hemorrhage. Practically all of the intestines lay outside of the abdominal cavity, and were covered with blood, dirt, fecal matter and hair. The only instruments at hand were those contained in an ordinary pocket

case. With pocket handkerchiefs and ordinary water the intestines were washed off and put back into the abdominal cavity, which was closed with a few ordinary sutures, the patient put back into bed with the firm belief that he would die directly. His temperature, however, never went above 100°, and he made a most excellent recovery and is still alive.

Dr. MACDONALD believed that Dr. Mitchell was to be congratulated on the outcome of his case. He believed that there was a great difference between a bullet wound received in civil practice and in time of war; a wide difference between the wound of a Mauser bullet and that of a pistol. It does appear that in the war in South Africa the man with gun-shot wounds of the abdomen did better when a non-operative method of treatment was pursued. In the Spanish-American war a surgeon from New Orleans did three laparotomies at Santiago with three deaths. While Dr. Macdonald was at Fort MacPherson he saw, ten days after the battle of Santiago, five men who had received gun-shot wounds of the abdomen and all of them were in good condition. He believed that the conditions for aseptic surgery in a field hospital are very poor and the transportation of men after a battle to a place where an operation can be done requires so many hours that there is very little likelihood of doing the patients much good by an operation. Military surgery in an active campaign is very different from civil surgery. On the other hand, Dr. Macdonald quite agreed with the gentleman who made the statement that every man who received a gun-shot wound of the abdomen should have a laparotomy at the earliest possible moment. The first effort of the time of operation should be in the direction of the control of hemorrhage. A very wide incision should always be made and the patient disemboweled. The cavity of the abdomen should be filled with hot normal salt solution and the intestines wrapped in hot tampons. He believed that the employment of the Lembert method of suture is by no means essential, for it is a well-known fact that sutures can perforate the intestines without much danger. One should never wait for symptoms of peritonitis, but should always operate at once. He believed that Dr. Mitchell's case at the end of sixteen hours was not very late. He did not think it at all remarkable that powder marks were not seen, because they do not carry far from a pistol. He believed that Dr. Mitchell's case had a septic peritonitis and had recovered just as other cases of peritonitis do, and mainly because the abdominal wound was left wide open. The fistula which developed may have been due to the giving way of some of the sutures of the intestines or to the gauze drain. It was most unfortunate that it did not develop at an earlier period when the patient was vomiting and probably somewhat distended, both of which it would have undoubtedly relieved. It must also be remembered that Flobert bullets will go through an abdominal wall and produce perforations of the intestines.

It was moved and seconded that, owing to the lateness of the hour, Dr. Macdonald's paper should be presented at some future meeting. Motion carried.

Moved to adjourn, seconded, carried.

ARTHUR W. ELTING, *Secretary*.

SAMUEL B. WARD, *President*.

## MEDICAL SOCIETY OF THE COUNTY OF ALBANY

## MEMORIAL MEETING FOR ADAM T. VAN VRANKEN, M. D.

A special meeting was held in Alumni Hall, Saturday, January 24, 1903, at 4 P. M., Vice-President Boyd in the chair.

There were present Drs. Babcock, Bailey, Boyd, Cook, Curtis, Davis, Elting, Macdonald, Mereness, Mosher, Skillicorn, Stillman, Tucker, Vander Veer, A., Vander Veer, E. A.

In calling the meeting to order Dr. Boyd said that the President, Dr. Ward, was unable to be present and had asked him to preside. He stated that the meeting was called to take action upon the death of Dr. A. T. Van Vranken, for many years a member of the Society as well as an ex-president of the same.

Dr. MACDONALD remarked that Dr. Van Vranken belonged to the old guard of the Albany Medical College, and that he was one of the last students of Dr. Armsby.

Soon after graduation he began the practice of medicine in Watervliet, where he spent his entire professional life. He was a prominent member of the Reformed church of that city and for many years president of the Y. M. C. A. The building now occupied by the Y. M. C. A. was largely a monument to his endeavor in the Christian work of that city. He was a physician of splendid presence, extreme care, rare judgment and common sense.

Dr. VANDER VEER remarked that Dr. Van Vranken seemed to be the link between the former and the latter generation of the members of the faculty of the Medical College. He had seen Dr. Van Vranken a few days after he had been stricken with paralysis and found him greatly depressed because of the cessation of his labors as a physician. At this time Dr. Van Vranken had related many of his earlier experiences, his disappointments, etc., and he seemed especially sad because of his being incapacitated at the time when success seemed to be within his grasp. He improved but very little from the paralysis which he sustained. The night before the attack he had been compelled to spend with an obstetrical case which taxed him greatly, and to his exertions upon this occasion the hemiplegia seemed to be largely due.

He was possessed of noble qualities and rarely ever criticised anyone. He embodied all the qualities of a Christian gentleman, and was also extremely well versed in his profession.

Dr. MERENESS said that over thirty years ago when he came to Albany as a medical student he met Dr. Van Vranken, who was at that time a student in Dr. Armsby's office. Each year it was the custom of Dr. Armsby to select some student from the senior class, whom he placed in charge of his office and whose business it was to assist him at operations, etc. In 1873 Dr. Van Vranken was the senior student in charge of the office, and in 1874 Dr. Mereness occupied that position. Immediately after graduation Dr. Van Vranken became an interne in the Albany Hospital.

He was always loyal to his friends and possessed many splendid qualities. He took an active part in everything that pertained to the building up of West Troy, and was in every way an excellent physician. Dr. Van Vranken was always a Christian gentleman and was one of the main pil-



lars in the church. During the past few years during his affliction the subject of death and the hereafter was often discussed and he was firm in his belief in the hereafter.

Dr. TUCKER wished to add a word of personal tribute and affection. He had also known Dr. Van Vranken at a student in Dr. Armsby's office and had been a friend of his ever since. Underlying all his work was the principle of being kind and just to all who came into contact with him. He always held his Alma Mater as very dear, and was president of the Alumni Association in 1894. He had also served the Medical Society in the capacity of president. Dr. Van Vranken succeeded because of his real worth and integrity, and he never attempted to rise in the world by dislodging others. The world is certainly better and richer for his having lived in it.

Dr. COOK knew Dr. Van Vranken very well, having graduated in the same class, and he had always been a friend of his although at times they had disagreed upon certain matters. During Dr. Cook's earlier years of practice he met Dr. Van Vranken very frequently, and he had always found him to be a very reliable man. Dr. Van Vranken was always a regular representative of his class at the Alumni meetings. Dr. Cook wished to endorse all that the other speakers had said regarding his high character and attainments.

Dr. STILLMAN wished to testify his appreciation to Dr. Van Vranken as a man. He had been a student with Dr. Van Vranken and had later on met him frequently professionally. Dr. Van Vranken was a genuinely good man and endeared himself to every one by his qualities of mind and heart. He had seen practically nothing of him during his illness, but he understood that he was just as cheerful as ever during adversity.

Dr. CURTIS said that Dr. Van Vranken came to his mind as one of the men whom he had known in the earlier times. He had always impressed him as a good, trustworthy, reliable man, and it had always been a great pleasure to meet him. He was always ready to advance any good interest. It was especially satisfactory to hear such expressions of his worth and character as had been voiced at this meeting.

Dr. BOYD remarked that in accordance with the custom upon such occasions he would appoint Drs. Cook, Mereness and Skillicorn to draft resolutions relating to the death of Dr. Van Vranken.

It was moved, seconded and carried that Dr. Macdonald be added to this committee.

Dr. MOSHER moved that the treasurer of the Society be authorized to procure a portrait of Dr. Van Vranken to be published in the ANNALS along with the resolutions, and that the expense of this publication be borne by the Society.

Motion seconded and carried.

Motion to adjourn, seconded and carried.

ARTHUR W. ELTING, *Secretary*.

SAMUEL B. WARD, *President*.

RESOLUTIONS, ON ANNOUNCEMENT OF DEATH OF DR. A. T. VAN VRANKEN,  
ADOPTED BY ALBANY COUNTY MEDICAL SOCIETY, SATURDAY, JANUARY  
24, 1903.

WHEREAS, This Society has received with profound sorrow the announcement of the death of Dr. A. T. Van Vranken, at one time its presiding



officer, and long an active, influential and much beloved member, therefore be it

*Resolved*, That the members of this Society desire to express their sense of personal bereavement in the loss of Dr. Van Vranken, and wish to testify to their appreciation of his qualities of heart and mind which made him a respected associate, a faithful friend, a conscientious and able member of the medical profession, and a citizen of sterling integrity, large heartedness and liberal aims.

*Resolved*, That it is our opinion that both the profession and the community have sustained a loss in his untimely decease, and that we tender our respectful sympathy to his sadly bereaved family in their great affliction.

*Resolved*, That the minutes of this meeting be published in the ALBANY MEDICAL ANNALS and that a copy of these resolutions be transmitted by the Secretary to the family of the deceased.

(Signed) D. H. COOK, M. D.

H. E. MERENESS, M. D.

W. D. STILLMAN, M. D.

Committee.

## Medical News

Edited by Eugene E. Hinman, M. D.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR DECEMBER, 1902.—Number of new cases, 50. *Classification of cases*: Dispensary patients receiving home care, 2; district cases reported by health physicians, 6; charity cases reported by other physicians, 29; total number of charity cases, 37. Moderate income patients, 13. Old cases still under treatment, 13. Total number of patients under nursing care, 64. *Classification of diseases*: (new cases) medical, 15; surgical, 7; gynecological, 2; obstetrical, 25; dental, 1; transferred to hospital, 2; died, 7.

*Visits of Guild Nurses*: Number of visits with nursing treatment, 460; for professional supervision of convalescents, 203; total, 663. Cases were referred to the Guild by the City Physician, by three of the health physicians and by 18 other physicians, one dentist.

*Special Obstetrical Department*: Physicians consulting obstetrician, 2 cases; obstetrician in charge, 3 cases; medical students in attendance, 7 cases; nurses in charge (3 graduate, 1 emergency and 2 assistant nurses), 5 cases. Number of visits by physicians, 30; by medical students, 24; by Guild nurses, 43; total number of visits in this department, 97.

ANNUAL MEETING OF THE NEW YORK STATE MEDICAL SOCIETY.—The Ninety-seventh Annual Meeting of the Medical Society of the State of New York was held in Albany, January 27th, 28th and 29th, President Henry R. Hopkins in the chair. A great many interesting and valuable papers were presented and discussed by the leading physicians and surgeons of the Empire State. Among those reading papers were the following: Drs. W. G. Macdonald, Arthur W. Elting, Henry L. K. Shaw and Alvah H. Traver, of Albany, and Dr. H. C. Gordinier, of Troy, all of whom are on the teaching staff of the Albany Medical College. During

the convention the Presidents' Association dined at the Fort Orange Club. The Annual Dinner of the Society took place on Wednesday evening at Hotel Ten Eyck and was a success, as it has always been. Dr. Joseph D. Craig, a member of the Committee on Hygiene, entertained that committee at dinner before the convention closed.

**ANNUAL MEETING OF ANATOMISTS.**—The Annual Meeting of the American Association of Anatomists was held in Washington, D. C., during the last week of December, 1902. Dr. Joseph D. Craig, of this city, a member of that association, reports that the papers read and discussed were not only very interesting but exceedingly valuable. Representing, as it did, the leading anatomists of this country the convention was an important one.

**REPORT OF THE COMMISSION IN LUNACY.**—The Annual Report of the State Commission in Lunacy contains much that is of importance to the practitioners of all creeds. There were 4,566 fresh cases of insanity committed to State hospitals during the past year, making a total of 24,061 insane patients in the State hospitals and 931 in private institutions. There were discharged during the year 1,125 cases as cured; 1,368, improved; 2,665, unimproved; showing a percentage of recovery of 24.6. A number of recommendations were made by the Commission, among which were the following: The erection of a new institution in Northern New York for the patients from counties adjacent to Albany county; the segregation of tuberculous patients in wooden pavilions on hospital grounds; the appointment of non-salaried clinical assistants, two for each hospital, who shall serve for one year, and if they desire to remain in the State service they shall be compelled to pass civil service requirements. The training schools for nurses established in connection with each hospital are very highly commended and it is stated that 895 nurses have been graduated since the establishment of the schools.

**ALBANY FRESH AIR GUILD.**—The Annual Report of the Guild has just been published and shows a very successful year of work. The Vacation Home was open during most of June, July and August, and many children, who could not otherwise have had an outing, were made happy and improved in health. In all 284 were at the Home during that time, each of them for two weeks. The Treasurer's report shows the total receipts to have been \$1,926.47; total expenditures, \$1,664.43; leaving a balance of cash on hand of \$262.04 and an invested fund of \$17,297.92.

**UNION ALUMNI SMOKER.**—The Union University Alumni Association of Northeastern New York held its annual smoker at the Fort Orange Club, January 16, 1903. About ninety graduates attended the smoker and a very pleasant evening was enjoyed. After an entertainment had been rendered short speeches were the order, and the Medical Department was represented by Dr. A. G. Root, Dean J. Newton Fiero responding for the Law Department and Prof. J. H. Stoller for the College. The following officers were then elected for the ensuing year: President, F. W. Cameron, Albany; vice-president, E. C. Angle, Schenectady; secretary, Robert M. Eames, Albany; treasurer, Walter S. McEwan, Albany.

**DRUG HABITS IN THE UNITED STATES.**—The New York School of Clinical Medicine has established a special department at Hartford, Conn., for the study of the neuroses and psychoses of alcoholism and of drug habits. This department is to be under the supervision of Dr. T. D. Crothers, who will deliver a course of clinical lectures on inebriety from alcohol, opium, chloral, cocaine and other narcotics. It is to be hoped that this departure of the School of Medicine in giving exact systematic instruction in these diseases will be of value to the profession of the country. Dr. Crothers, who also edits the *Bulletin* and *Journal of Inebriety*, which have lately combined under one administration, devoted exclusively to the scientific study of spirit and drug diseases, has circulated a manifesto prepared by the associations of medical temperance men of America and Europe urging total abstinence among the medical profession.

**A NEW INDEX MEDICUS.**—The Carnegie Institution, of Washington, D. C., has undertaken to revive the Index Medicus and will publish Volume I of *Index Medicus, Second Series*, during January, 1903. Dr. Robert Fletcher, who was one of the publishers of its predecessor, will be the editor-in-chief of the new journal.

**SEPTICÆMIA TREATED WITH FORMALIN.**—If the experiments of prominent New York physicians prove successful the treatment of the several varieties of general septic poisoning will be revolutionized. The injection of several hundred cubic centimetres of formalin into the veins of patients suffering from puerperal septicæmia has been a bold experiment, but the latest advices seem to indicate that the treatment is proving successful. If this proves true, a way seems to be opened for investigations in the treatment of other diseases where there is present a germ infection.

**UNITED STATES ARMY MEDICAL CORPS.**—Examinations of candidates for appointment in the Medical Corps of the Army will be resumed by the Army Medical Board in Washington, on April 20, next. Classes will be invited to appear on April 20 and each Monday thereafter so long as is necessary. Full information as to method of application, nature and scope of examination, etc., will be furnished by the Surgeon General's office upon request of those interested. Applicants from civil life are restricted in age to twenty-nine years, and hospital training or professional experience in private practice is expected of all candidates. There are at present thirty-five vacancies to be filled.

**PERSONAL.**—Dr. W. F. ROBINSON (A. M. C., '84), formerly of this city, but now practicing in New York City, has gone to Florida for the season, where he is resident physician at the Colonnades Hotel at Seabreeze, Fla.

—Dr. P. G. COTTER (A. M. C., '87), of Yuma, Arizona, has gone abroad for a year of study.

—Dr. J. F. FITZGERALD (A. M. C., '86), has been appointed general superintendent of all charitable or city hospitals in Kings and Queens counties with headquarters at Kings County Hospital, Brooklyn, N. Y.

—Dr. F. D. BRANCH (A. M. C., '99), assistant surgeon of volunteers, having served for three years in the Philippine Islands, has been honorably

discharged from the service with the rank of Captain and will open an office for practice in the immediate future.

—Dr. T. W. SALMON (A. M. C., '99), has been appointed bacteriologist at the Willard State Hospital.

—Dr. E. W. WILCOX (A. M. C., '94), has removed from Earlville, N. Y., to Norwich, N. Y., where he is now in practice.

—Dr. THOMAS MCCARTHY (A. M. C., '99), has been appointed assistant health officer of Troy, N. Y.

—Dr. JOHN ADEY (A. M. C., '99), who has been suffering from a very severe injury to his knee and who has been in the service of the health department of Cohoes, N. Y., for the past year, is about to open his office for practice in that city.

—Dr. F. A. SMART (A. M. C., '99), who has been very sick during the autumn, is again able to be about his practice in the town of Nassau, N. Y.

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### Book Reviews

*A Text-Book of Nursing.* For the Use of Training Schools, Families and Private Students. By CLARA WEEKS-SHAW. Third Edition, Thoroughly Revised and Enlarged. New York: D. Appleton & Company. 1902.

This book consists of twenty chapters and a vocabulary and index. The first three chapters are in a general way introductory, giving instructions to the nurse for self-guidance and for the care of hospital wards and rooms for the sick. Circulation, the pulse, temperature, respiration, ventilation, warmth, the care of the skin, baths, massage, the urine, catheterization and enemata are then taken up, and a chapter is then written upon "The Observation of Symptoms." Surgical nursing, gynecology, obstetrics, the care of sick children and emergencies are discussed fully, and a chapter on "Special Medical Cases" describes briefly the features of certain diseases which may be observed by the nurse, and guide her ministrations, and suggests the possible developments which she should be ready to meet. The affections included in this chapter are catarrh of the nasal mucous membrane, influenza, bronchitis, asthma, laryngitis, pleurisy, pneumonia, phthisis, cardiac disorders, aneurism, dyspepsia, gastritis, peritonitis, appendicitis, typhlitis, intestinal obstruction, dysentery, cholera, common forms of skin disease, paralysis, neuralgia, locomotor ataxia, cerebral meningitis, chorea, hysteria, insanity, delirium, diphtheria, Asiatic cholera, typhoid fever, typhus fever, scarlet fever, smallpox, malaria and rheumatic fever.

This book may be freely praised. Apart from its excellence and completeness, it may be regarded as a guide to the differentiation between the functions of the physician and the nurse, and shows how well the latter may supplement the work of the former to the benefit of the patient.



There are still a few practitioners who fear the introduction of the trained nurse and are willing to take the risks attending the presence of an unskilled assistant, and to them the reading of such a work as this should prove valuable. We believe that the author might justly claim a place for her book in the physician's library, as well as in that of the nurse and layman, and that its presence there would do good.

*Biographic Clinics.* By GEORGE M. GOULD, M. D. P. Blakiston's Son & Co., Philadelphia, Pa. 1903.

The main part of this little volume is taken up with a discussion of the lives of DeQuincey, Carlyle, Darwin, Huxley and Browning from the point of view of their health. As is well known, all of these individuals suffered more or less during most of their lives from almost constant minor illnesses which seriously interfered with their work. DeQuincey suffered from torpidity and languor, associated with "irritation of the stomach" and "derangement of the liver." Carlyle was a constant sufferer from dyspepsia. Darwin suffered from weakness and stomach symptoms. Huxley suffered from chronic dyspepsia. Browning had almost constant headaches.

In all these cases no well-marked organic lesion was present, as far as the physicians of that time were able to detect by their methods of investigation. Dr. Gould attempts to show that the whole trouble in all these cases was caused by eye strain. He collects, first of all, quotations from biographies of the individuals under discussion, and then discusses the various facts and symptoms brought out, at length. His arguments are specious and well put, but their tone reminds one of that of the advocate making a case, rather than that of the scientist who is aiming at truth, and truth alone. We do not wish to accuse Dr. Gould of conscious distortion of facts, but we fear that he is suffering from that mental astigmatism which is so common among men who have practiced a narrow specialty for a lifetime. While we do not doubt for a moment that signs and symptoms of ocular disease were present in all these cases, we do very decidedly think that Dr. Gould has greatly over-exaggerated their importance and their effect upon the health of the individuals discussed. Notwithstanding these drawbacks to the book, we think the layman, as well as the general practitioner, will find it interesting reading.

G. B.

## Current Medical Literature

### MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

*The Treatment of Gastric Ulcer by Olive Oil.* (Ueber die Behandlung des Ulcus Ventriculi mit Oliven Oel.)

WALKO. *Centralblatt für innere Medizin*, 1902, No. 45.

The brilliant results which the writer obtained by the administration of large doses of olive oil (3-10 ounces daily) in different conditions of gastric hyperacidity suggested to him the same treatment for ulcer. As the

principal condition for the cure of ulcer is the removal, as far as possible, of every irritation, the diminution of the hyperchlorhydria ought to have a favorable influence in the cure. The oil is also of value, as it is absolutely non-irritating, has a high nutritive value, is easily absorbed, has no injurious influence on the motility, and does not favor bacterial changes even in high grades of dilatation. The oil has in addition a favorable action in regulating the movements. It seems also to act as a protector for the ulcer from the acid secretion much in the same way as bismuth. The evidence of this is seen in the rapid disappearance of the boring and tearing pains in the stomach after the administration of oil. The use of oil in a recent gastric hemorrhage is superior to any other food, as it is less likely even than milk to disturb a recent thrombus. In a recent ulcer the oil is given in teaspoonful doses, gradually increased to two ounces, three times daily. If there is great aversion to the oil, then three to six ounces in the form of a fine emulsion may be administered through a tube. This treatment is continued with the exclusion of all other food until the severest symptoms of ulcer disappear, which is usually in three to six days. This method has also been successful in cases of chronic ulcer, and even in cases after gastroenterostomy, where the ulcer had not been completely healed.

This treatment occupies a shorter time, as complications rarely develop, and in the first week the patients are usually free from distress. The oil is continued for fourteen days with the usual regulation of the diet. Narcotics and Carlsbad water were not administered, but the patients were kept in bed.

The writer gives the histories of seven cases which were successfully treated in this way.

*Persistent Hereditary Oedema of the Lower Limbs.*

H. D. ROLLESTON. *The Lancet*, September 20, 1902.

The author reports two cases of this strange affection existing in a brother and sister. The œdema was permanent as long as they led an ordinary life and got more marked after exercise or a warm bath, but disappeared after rest in bed for some days. It produced no pain and was troublesome only from the weight and size of the swollen legs. The mother, æt. 45 years, had suffered from the same affection for thirty-five years. There were five other children in the family, none of whom had a similar affection. None of the mother's brothers or sisters survived infancy, and his condition, which was apparently transmitted from the mother, to her two children, could not be traced any further. When the limbs were warm, the skin was natural in color, but the circulation was feeble. The œdematous skin pitted on pressure and was cold to the touch. No thickening of the skin, such as is seen in elephantiasis, exists either in the children or mother. The swelling was confined to the lower extremities, and chiefly to the legs and feet. The swollen parts were not painful or tender, nor was there any puffiness of the face, hands, or any other part of the body.

Physical examination disclosed no cause for the œdema. The heart was

normal. There was no anæmia, in fact, the red corpuscles, in each case, numbered 5,800,000 per c. m. The urine was normal. There had been no hæmoglobinuria, and no signs of pressure on the inferior vena cava or of lymphatic obstruction, venous thrombosis or peripleral neuritis. They never had been away from England, never had had erysipelas, or urticaria, or gastro-intestinal intoxication, which is so common in angio-neurotic œdema. At birth they were both blue babies, and were very subject to chilblains. Both the feet and hands became livid, when cold. The patients were healthy-looking, intelligent, and rather small for their ages. The author states that the cases resemble the remarkable family described by Milroy, of Omaha, in which out of 97 cases, in six generations, 22 persons (12 males, 7 females and three unknown) had solid œdema of one or both legs without any special inconvenience or progressive increase in the disease. The condition was congenital except in one case, in which it developed at the age of 12 years. Milroy, after tentatively suggesting that the condition might depend on a congenital absence of valves in the veins, came to the conclusion, that it was more closely allied to angio-neurotic œdema than to any other disease. The author's cases differed from those of Milroy, in that they were hereditary instead of congenital.

*The Treatment of Diabetes. (Die Behandlung der Zuckerharnruhr.)*

EICHHORST. *Therapeutische Monatshefte, September, 1902.*

The writer has treated 159 cases of diabetes in Zurich since 1884, of whom 108 were men and 51 were women. This number constituted .4 per cent. of all cases treated. The private patients were proportionately four times as numerous as the hospital patients. Although it is considered that diabetes occurs more frequently among men, the author's cases showed that the frequency was practically the same in both sexes. Four of the cases were in childhood and all died of diabetic coma. As to the treatment most stress is placed upon the regulation of the diet and drugs play an unimportant part. As drugs and regulation of diet are ordered together, it is difficult to say which has the more importance in the result. The action of drugs is certain only when in severe cases, it diminishes or removes entirely the sugar which a strict diet has not been able to accomplish. Salol as recommended by Ebstein, antipyrin and a host of old and new remedies gave equally valueless results. The danger is that the use of drugs will make the physician less careful as to the regulation of the diet. The drink cure as carried out in Carlsbad and Neuenahr produces only a temporary favorable action and this depends largely upon the accompanying rigid diet. In the diet attention should be paid not only to its character but also to its quantity. A healthy man requires daily food equivalent to 2500-3000 calories. But a diabetic may lose 400 grams of sugar or 1600 calories and thus with a normal quantity of food be underfed. A question of great practical importance is whether a rigid anti-diabetic diet should be ordered at once or gradually. The author believes that for many a sudden change to a strictly animal diet is not well borne and is even dangerous, inducing gastro-intestinal disorders, anto-intoxication, coma, and therefore gradually makes the change.



As to liquids, good well water and alkaline and carbonated mineral water and also unskimmed milk are recommended. Alcohol is not approved, although it has a considerable caloric value. When the urine has become free from sugar, 25 grams of bread may be given daily, and the quantity slowly increased to 70-100 grams, provided no sugar appears in the urine. Importance is also to be placed upon the clothing, bathing and exercise. Exhausting exercise should be avoided as coma may follow.

Recently the milk cure has been again advocated, but the author has never seen a case cured by this treatment. There has been no result from the use of pancreatic extracts.

Although little is to be expected from medication in diabetes, still drugs may be of great value in treating the complications.

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### DERMATOLOGY

Edited by F. C. Curtis, M. D.

*Eczema in Infants, Its Relation to the Intestinal Tract and Its Treatment.*  
(*Ueber das Säuglingseczem, seine aetiologische Beziehung zum Intestinaltractus, daraus sich ergebende Therapie.*)

REV. *Jahrbuch für Kinderheilkunde* September, 1902.

The writer classifies the eczema of infants apart from that occurring later in life, on account of differences in etiology, mode of onset, course, location and response to treatment. Rey has had fifty-four cases of infantile eczema and divides them into three distinct varieties. First, acute eczema with the febrile manifestations, which commence like erythema exudativum multiforme or widespread urticaria, and after a short time develops into a universal eczema. Second, a dry eczema, which commences on the cheeks and spreads over the face, elbows, knees, etc., and may even affect the entire body. It generally remains confined to the face and scalp. Third, a vesicular form which soon becomes purulent and appears like impetigo. Between these distinct forms many varieties appear.

Infantile eczema most always makes its appearance before the sixth month and the most constant cause lies in some affection of the gastrointestinal tract. The writer obtained a history of previous intestinal disorder in all his cases. This may result from overfeeding, congenital digestive weakness, autointoxication from the lower bowel, etc. The stools in the second form were generally crumbly and constipated, while in the other varieties diarrhoea, green and undigested stools were more frequent.

The course of the disease is apt to be chronic and relapses are the rule. It rarely persists after the third year.

The etiology suggests the treatment which consists mainly of proper food and bowel antisepsis. In the acute febrile form, colon irrigations of normal salt solution or of one-half per cent. tannic acid solution are recommended.

The writer advises the reduction of carbohydrates in the diet. Locally the crusts should be removed and some bland ointment applied.



*A Note on Albinism, with Especial Reference to Its Racial Characteristics Among Melanesians and Polynesians.*

C. G. SELIGMANN. *The Lancet*, September 20, 1902.

While in Torres Straits and New Guinea, in 1898, the opportunity arose of studying a number of albinotic subjects who differed in certain characteristics from European albinos. Reference to the most authoritative records of observers in the Pacific Islands showed that these characters had been noted wherever albinism had been recorded among a Melanesian or a Polynesian population, so that it seems reasonable to suggest that the type of albinism occurring among the races alluded to is as much a racial characteristic as height, skin color, or cephalic index. It is to be noted that leucoderma of an exceedingly definite type is very common throughout the whole of British New Guinea, including the western tribe of Torres Straits, who are most certainly Papuans.

Albinism, as seen among Papuans, is always of the type referred to, for the choroid is never pink and the hair is more or less tow-colored, the skin varies from a pink-white color to that of "café au lait," while the eye is generally greenish, hazel or brown. The hair is no finer or silkier than in the normal Papuan, and being frizzy, keeps strictly to the racial type except as regards to color. With a light greenish eye there is usually associated a pinkish-white skin, certainly pinker where unexposed than that of the normal North European.

These subjects show great intolerance of sunlight, and certain albinos of this type suffered far more from photophobia than did a North European with apparently similar pigmented eyes under identical conditions. They may be noticeably duller mentally and less active in their movements than their normal fellow-countrymen; they seem to possess more subcutaneous fat, and their skin may feel thick and harsh.

Nystagmus and jerky movements of the eyes were absent in all the cases of albinism seen in New Guinea. This may, perhaps, be correlated with the superior visual acuity of Melanesian albinos as compared with that of those commonly seen in this country.

As in other races, albinism among Melanesians occurs in special families and groups of families.

Partial albinism is rare. Only one case was seen, and in this, contrary to general experience, there was marked symmetry on both sides of the body.

Leucoderma, which, as already stated, is remarkably common and is generally distributed throughout New Guinea and Torres Straits as in localities, tends to be symmetrical and is a disease of middle and advanced life. The borders of the white patches are always sharp and the bleaching is not, as a rule, preceded by an increased deposit of pigment. In no case could any alteration of sensation or any trophic change be detected in the affected areas, nor was there any evidence of the change being due to vegetable parasites.

*The Light Treatment of Lupus. (Die Lichtbehandlung des Lupus.)*

O. V. PETERSON. *St. Petersburger medicinische Wochenschrift*, No. 44, 1902.

The author visited Finsen at Copenhagen, and describes his apparatus and method. An arc lamp of seventy-five milliampères is surrounded by an iron ring upon which four of the apparatus are attached at an angle of forty-five degrees. Each apparatus consists of a long metal tube, on which rock crystal is attached for the collection of the light and then directs it in parallel rays to the underlying lens, where the rays are concentrically focussed. The tube is also provided in its outer mantle with a current of water which prevents too great development of heat from the concentrated light. Inasmuch as the red color of the blood interferes with the transmission of certain chemical rays, it is necessary to reduce the amount of circulation as far as possible in the part under treatment. This is accomplished by a Finsen compressor, which consists of two rock crystals between which there is a circulating stream of water. For the use of the Finsen apparatus the patient is placed upon a horizontal table or a reclining chair, and the compressor is pressed upon the area to be treated, indicated by a blue pencil mark, and the illumination is begun. This is generally well borne, but in nervous persons occasionally some slight apprehension is noted. It is necessary that the application be continued carefully upon the indicated area for a period of from one-half to one hour, which involves the attendance of a nurse. There is no complaint of pain or burning, but the patient occasionally experiences an uncomfortable sensation from the continued pressure. Immediately afterward there is no perceptible effect, but in the course of from one or two to twenty hours hyperæmia, swelling and occasionally blisters, appear, which fade away in the course of two or three days. The skin appears smooth, glistening and soft, and the nodules are seen to have diminished in size or to have disappeared. In this way daily applications are made upon one, two or three small areas overlying the lupus infiltration, usually beginning with the border. After the surface has been covered the applications are discontinued for several days or a week. In extensive disease great patience is necessary and occasionally patients need to submit to two hundred sittings, though recovery often follows eighty applications and in some cases ten or twenty are enough.

The writer describes the use of both sunlight and electric light, different appliances having been prepared for either one or the other.

The indications for the use of Finsen's apparatus are lupus vulgaris, lupus erythematosus, capillary venectasies and nævi, aleppo boil and actinomycosis of the skin. In conclusion it may be claimed for this method of treatment that any case of lupus vulgaris of the skin and the easily reached mucous membranes, as well as the different forms of skin tuberculosis may be carried to recovery.

The writer further recommends the establishment of Finsen institutions in different localities.

## PATHOLOGY

Edited by George Blumer, M. D.

*Histological Changes in the Nervous System of Men and Animals, Resulting from Lightning Stroke, or the Action of Powerful Electric Currents* (Histologische Veränderungen im menschlichen und thierischen Nervensystem, theils als Blitz—theils als elektrische Starkstrom-Wirkung.)

S. JELLINEK. *Archiv für pathologische Anatomie und Physiologie und für klinische Medizin*, Bd. 170, Ht. 1, 1902.

In this article Jellinek reviews our knowledge of the action of lightning stroke and electrical currents, and describes the results of his own investigations.

According to most observers, the findings in either animals or men dead of lightning stroke, or as a result of contact with strong currents, are almost negative. Almost the only constant find is the dark color and fluid condition of the blood. Many authors have also described hæmorrhages in the meninges, in the ependyma, and on the surface of the brain. It is questionable whether these latter hæmorrhages are not similar to those found beneath the pleura and pericardium, associated with cardiac disturbances, as they have generally been seen in the most protracted cases of death from electricity.

The author investigated first the effect of immediately fatal currents, and secondly the effect of electrical contacts from which the patient immediately recovered, but in which death followed as a result of secondary changes in the nervous system. In case of death from immediate shock, the author was unable to find, as far as the naked eye appearances were concerned, anything more than has already been described. Microscopically, however, he observed very definite hæmorrhages, most numerous in the spinal cord, but also present in the brain, which were sometimes associated with a definite rupture of a blood vessel. There were also definite changes in the ganglion cells, both in the brain and cord. These took the form of chromatolysis and tigrolysis, changes in the cell contour, swelling of the axis cylinders, and displacement of the nuclei. In cases where the electric current did not immediately result in death but where it was followed by distinct clinical symptoms, usually in the form of paralyses, the author also found definite changes. These changes were of a degenerative nature, and were found not only in the spinal cord, but also in the spinal ganglia and in the peripheral nerves. The degenerations of the spinal cord were sometimes in the posterior columns, sometimes in the lateral columns. The changes in the nerves were generally fresh, and best made out by Marchi's method. The changes in the spinal ganglia took the form of various degenerative changes in the ganglion cells.

The author concludes that the paralyses with similar clinical symptoms which occur after electric shock, and which have been described as nervous or functional, are due to organic lesions. He also concludes that death from electricity is not to be put down to the simple fact of shock, but must also be considered to have a definite pathological basis.



*Experimental Observations on the Action of Dead Tubercle Bacilli. (Experimentelle Untersuchungen über die Wirkung tochter Tuberkelbacillen.)*

CARL STERNBERG. *Centralblatt für allgemeine Pathologie u. pathologische Anatomie*, Bd. XIII, No. 19, 1902.

The subject of the action of dead tubercle bacilli in the body has been previously investigated by a number of writers, but there are still some questions connected with the subject upon which there is some difference of opinion. Sternberg's work had for its object the clearing up of the difference of opinion. His experiments were made upon rabbits, which were injected intravenously, or upon guinea pigs, which were injected intraperitoneally. He first of all injected tubercle bacilli from both solid and fluid cultures, which had been killed by heat. As a result of numerous experiments, he came to the conclusion that dead tubercle bacilli could produce symptoms of disease, and death in both guinea pigs and rabbits. Where strong suspensions were injected intravenously, formation of definite tubercles in the different organs took place. Histological examination of these showed that they had all of the characteristics of tubercles caused by living tubercle bacilli, including caseation. Tubercle bacilli were easy to stain in these tubercles. In cases in which very thin suspensions of tubercle bacilli were used the animal died, but very often there was no tubercle formation. The same was true of pulverized tubercle bacilli used. The writer then went on to determine whether the formation of tubercles was due to the chemical products of the dead tubercle bacilli, or was due to some substance contained in the bodies of the bacilli themselves. He came to the conclusion that some substance was present in the body of the tubercle bacilli which gave rise to the tubercle nodules, inasmuch as injection of the extract alone did not produce tubercle nodules. By immunization with tuberculin he was able to protect animals against the action of dead tubercle bacilli. After working with the tubercle bacilli he then tried the effect of some of the acid resisting bacilli, using mainly Möller's timothy hay bacillus. He found that this organism in a living state produced nodules which were similar to tubercle nodules, except that caseation was never present in them. Dead Möller's bacilli were incapable of causing nodules. As a result of his observations, he comes to the conclusion that dead tubercle bacilli can set up changes exactly similar to those produced by living bacilli. The bacilli retain their staining reaction in the tissue for a long period of time. The pathogenic properties of the tubercle bacilli are due to a substance which is intimately associated with the body of the bacilli, and which is not destroyed by continued sterilization with moist heat. This characteristic substance separates the tubercle bacilli from other bacilli which resemble it in many respects, such as the acid-fast bacilli. How much the action of dead tubercle bacilli has to do with changes in human subjects it is difficult to say. It is possible that a good many of the bacilli which are found in the sputum of tuberculous patients are dead, and it is also possible that some of the changes produced in the internal organs of



human beings are due to the action of dead bacilli. It does not seem likely, however, that such processes play any great rôle, inasmuch as the lesions produced by dead bacilli are strictly limited and show no tendency to spread.

*Experimental Lesions of the Kidney. (Lésions Expérimentales du Rein.)*

J. CASTAIGNE and F. RATHERY. *Archives de Médecine Expérimentale*, Tome XIV, No. 5, 1902.

The experiments which these authors performed bear upon the effects which various injuries to one kidney produced upon the other kidney. The authors, first of all, discuss the question of the most satisfactory methods for fixing and staining kidney substance. They point out that the parenchymatous cells of the kidney are amongst the most sensitive in the body, and undergo changes extremely rapidly, so that in order to obtain sections of kidney which do not show post-mortem change it is necessary to remove the organ immediately after death, or even in animals during life.

The authors further point out that the usual hardening fluids produce changes in the kidney cells, which have often been interpreted as pathological lesions, but are in reality only artefacts. They recommend particularly for fixation the method of Sauer, in which the hardening fluid consists of absolute alcohol, chloroform and glacial acetic acid, and after this fluids containing osmic acid. Orth's and Zenker's fluid, as well as alcohol, they find very unsatisfactory.

The authors performed a number of experiments upon rabbits and guinea pigs, in which they injured one kidney and then noted the effect upon the other. The form of injury which they produced varied. Sometimes they tied off the vessels in one side, sometimes they tied off the ureter, at other times both vessels and ureter, and finally in some cases they injected bacterial or chemical substances into one kidney. In some cases the animals survived, but in other cases they died with uræmic symptoms, a fact which has been noted before in similar experiments, and also after operative procedures in human beings. On examination of the other kidney they invariably found lesions. These lesions were almost entirely confined to the convoluted tubules and were patchy in character. They consisted essentially in the breaking down of the protoplasm of the affected kidney cell. The authors explain the change as being due to resorption of cell products from the injured kidney. These cell products they believe are carried to the uninjured kidney, where they produced toxic effects.

The authors have shown in another article that the blood serum of animals in whom kidney cells have been injected is nephro-toxic, and they believe that in injury to one kidney both the serum from that kidney and the absorbed broken-down cells are capable of causing cytolysis in the other kidney.

# ALBANY MEDICAL ANNALS

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## Original Communications

### SYMPOSIUM ON ARTERIO-SCLEROSIS.

*Read before the Medical Society of the State of New York, at the  
Ninety-Seventh Annual Meeting, held in Albany,  
January 27-29, 1903*

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#### I. THE EARLY DIAGNOSIS AND SYMPTOMS OF ARTERIO-SCLEROSIS.

By DELANCEY ROCHESTER, M. D.,

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The recognition of an advanced case of arterio-sclerosis, with its thick-walled, inelastic vessels, hypertrophied heart and other organs presenting varying grades of impairment in nutrition and function is as easy as the induction of improvement in such a case is difficult. It therefore behooves us to so study our cases that we may recognize the condition in time to check its progress. In almost no other class of cases—except the distinctly infectious—does etiology have such an important bearing from a diagnostic standpoint. Therefore a most careful investigation of the occupation and customary mode of life of the individual, as well as of his heredity and previous diseases, is in order.

Etiologically cases may be divided into those due to strain of occupation, those due to poisons introduced from without, into the economy, and those due to poisons arising within the individual caused by faulty metabolism, either anabolic or katabolic.

Into any of these classes heredity may enter as an etiologic factor of considerable importance. Into almost all cases two or more of these etiological factors enter.

The occupations that produce great muscular strain are those in which heavy lifting, carrying, hoisting, etc., occur.

The poisons introduced from without are syphilis and other infections, lead and alcohol. Those arising from within are varied in character, some absorbed from the gastro-intestinal tract, arising there from poor quality of food or impaired digestive power of the individual, some due to impairment of the excreting function of skin, bowels or kidneys, and some due to faulty cell metabolism resulting from deficient oxygenation. Gout and lithæmia probably come under this heading. These poisons, according to Dr. Sansom, act either directly upon the internal coat of the vessel or in the lymphatics which are so abundant around the external coat, or in the lymphatics in the fibrous tissue of the various organs. These poisons show the result of their irritation by fibrosis, usually most pronounced in the subendothelial layer of the intima, preceded by degenerative changes in the media and followed by extension of the fibrosis into the media and externa. The symptoms are so varied, according to the cause and the organ or organs in which the disease is most pronounced, that a clinical picture applicable to all cases cannot be made.

The symptoms may be classified under the heading of (*a*) cardio-vascular-hæmic symptoms, including those preceding and accompanying gangrene; (*b*) cerebral symptoms; (*c*) renal symptoms; (*d*) pulmonary symptoms and (*e*) symptoms referable to the gastro-intestinal system.

Beginning with the last I will briefly review the symptoms in each class and conclude by a statement of the essential points in early diagnosis, leaving the details in each class to be taken up by the succeeding speakers. The gastro-intestinal symptoms referable to arterio-sclerosis are chiefly those due to interference with functions consequent upon the diminution in blood supply to the secreting apparatus and to the musculature of the viscera. Among these symptoms stand prominently forward constipation and indigestion, both intestinal and gastric, in some cases one portion of the digestive tract showing the greatest disturbance; in others, another portion. Distension of the stomach or bowels or both, flatus and eructations are not uncommon.

In some cases the pulmonary symptoms are so pronounced that

one writer describes a clinical group that he calls that of "Spasmodic Asthma and Pulmonary Affections." The following case is a good illustration of this class of cases.

J. H. B.; age twenty-eight years; American; carpenter. Family history good. Personal history: habits, tobacco in excess, liquor moderate. Diseases: gonorrhœa and probably syphilis in 1897; injury with severe secondary hemorrhages in 1899; rheumatism, possibly gonorrhœal arthritis in 1900. No other diseases. Early in 1902, after hard work and exposure, he had an asthmatic attack of considerable severity; he has had several since, all accompanied by profuse nasal discharge, at intervals of two or three months. Patient came under observation January 7, 1903, suffering from dyspnea and cyanosis, the attack having been precipitated by prolonged hard work in cold, damp weather, the patient drinking heavily during the time. Examination of the nose revealed polypoid degeneration of the ethmoid region in both nasal chambers, superior part of choasmæ being filled with polyp tissue. The urine was 450 cubic centimetres, acid, sp. gr. 1.030, urea, 13.5 grammes, no albumen; the microscope revealed hyaline and granular casts. Physical examination of the chest showed emphysema of both lungs with sibilant and sonorous breathing and a few moist rales. The heart was enlarged, the first sound weak and the pulmonary closure accentuated. The pulse was increased in tension, of moderate frequency and size, and regular. The vessel walls in all palpable vessels were distinctly thickened. In this case, of course, the polypoid growths and the renal disease have to be considered, as well as the arterial degeneration, in their relation to the asthma and emphysema.

Another more typical case of asthma of arterio-sclerotic origin is the following.

D. M.; male; physician; age thirty-one years; American. Father died of disease of heart and arteries. Mother living. Of nervous temperament. Personal history good, except for perityphlitic abscess discharge through bowel twenty years ago. In 1890, after severe struggle in a tug-of-war, he was seized with shortness of breath. Since that time he has had several attacks of wheezing and dyspnea, especially after exhausting work. On January 15th he was seized with a distinct asthmatic attack. Physical examination revealed a mild degree of emphysema, asthmatic breathing, rales, heart slightly enlarged and, in spite of the asthma, the aortic closure accentuated. Urine 800 cubic centimetres, acid, sp. gr. 1.030, urea, 24 grammes, indican in excess; albumen, a trace; microscope, urates. Pulse full, tense, slow, regular. Vessel wall distinctly thickened. Attack relieved by sweats, nitroglycerine and potassium iodid.

Chronic fibroid pneumonia is not infrequently associated with arterio-sclerosis and may be considered a pulmonary expression of the disease in certain cases. Many of the pulmonary symptoms, however, such as dyspnoea, asthmatic breathing, bronchitis and



œdema, are frequently referable to the morbid condition of the heart and kidneys rather than to that of the arteries themselves. Nevertheless, a sufficient number of cases remain, unaccounted for by kidney lesions, to give them a place in the semeiology of the disease. The symptoms of arterio-sclerosis referable to kidney lesions are those of interstitial nephritis of such grade as to interfere with proper excretion, varying from mild disturbance of cutaneous, digestive and nervous systems to those of pronounced uræmic poisoning.

The cerebral symptoms vary from mild degree of dizziness and lack of memory, particularly of recent occurrences, to violent vertigo, complete loss of memory and actual dementia, and apoplexy; the eye symptoms are chiefly loss of vision, more or less pronounced according to the degree of involvement of the vessels of the retina. The group of symptoms included in the class that I have termed the cardio-vascular-hæmic are naturally the most interesting of the several groups, and the ones upon which the diagnosis ultimately must depend. The symptoms that I have mentioned as occurring in the several groups referred to may be dependent upon several morbid conditions and it is only when they are associated with those of the circulatory apparatus, and are relieved by measures directed to improving the state of the vascular system that we can consider them as symptoms of arterio-sclerosis.

In all cases of arterial disease beginning in the capillaries and arterioles—and almost all cases of arterio-sclerosis begin in that area—there is of necessity an alteration in the blood itself, partly due to lack of proper supply of nutriment and partly due to improper oxygenation and excretion, and partly due to the poison of the primary cause of the disease. Thus there is an anæmia of greater or less degree according to the primary etiological factor, the anatomical system that is most pronouncedly involved and the degree to which the arterio-sclerosis has progressed. The symptoms may vary from a persistently increased arterial tension with slight cardiac hypertrophy and increased intensity of the second cardiac sound as heard over the aortic orifice to the beaded or pipe-stem arteries, the greatly dilated left ventricle, the attacks of angina pectoris, marked dyspnea, venous congestions and dropsies of the several organs and regions of the body, the evidences of pronounced cardio-vascular incompetence; or the complete occlusion of the lumen of a given vessel with fibroid

or fatty degeneration, or gangrene of the part thus deprived of nutriment. It is my privilege, however, to call your attention to some of the earlier symptoms and signs of this widespread degenerative process. These symptoms and signs are especially associated with the capillary degeneration that causes rise in tension in the pulse. Therefore our first attention should be devoted to the recognition of this condition. While the recognition of increase in tension is of importance the other qualities of the pulse should not be neglected; for fully as much is to be learned from the careful study of the volume, frequency and rhythm as from that of the tension.

In almost all cases, except to some of those due to strain of occupation, the disease begins in the capillaries and consequently early in the disease we have a greater or less degree of cardiac hypertrophy. This hypertrophy of heart, together with the peripheral resistance, increases the tension and volume, slows the rate and modifies the rhythm in such way that the vessel fills slowly, retains its volume for a longer than normal period and slowly empties itself. This character of pulse is an important early evidence of the disease and can be readily recognized if one uses three fingers in feeling the pulse, or follows Sansom's suggestion of laying one finger lengthwise along the radial pulse, supporting the wrist of the patient with the other hand.

The evidences of peripheral resistance to be noted in the pulse investigated in this way are as follows: The character of the pulse is to be noted with slight pressure of the fingers; if by increasing the pressure the pulse becomes more evident, and then by decidedly greater pressure on the part of the finger toward the heart it is imperceptible by the fingers beyond, it is a pulse of moderately increased tension; if, however, it is almost impossible or entirely impossible to shut it off by much pressure it is a pulse of greatly increased tension. Again the condition of the wall of the artery can be investigated at the same time. If we shut off the pulse by pressure with the finger nearest the heart, in a normal condition the artery collapses beyond and cannot be felt by the fingers toward the periphery; if the walls are thickened by the fibrous change, the vessel can be distinctly felt as a cord beyond. The sphygmograph, arteriometer and pulse pressure gauge in their present state of development are, in the opinion of the writer, not to be compared with the educated fingers in determining the character of the vessel or the quality of the

pulse. At the same time with the increase in tension of the pulse the cardiac hypertrophy is usually demonstrable as is also the accentuation of the closure of the aortic valves. Both of these signs may, however, be interfered with if there is any considerable degree of pulmonary emphysema; and this, in the experience of the writer, is not at all uncommon.

Another relatively early symptom of arterio-sclerosis is the occurrence of vague pains or abnormal sensations, such as tingling, prickling, numbness or persistent coldness in various parts of the body, especially the limbs. These are frequently considered muscular rheumatism and treated as such. The appearance and persistence of such pains and the occurrence of sharp neuralgic attacks should call for the careful study of the pulse and blood vessels. These pains are due to malnutrition, the result of lessened blood supply through diminution of calibre or obliteration of capillaries, and the anæmia that I have already referred to as present in all these cases.

This malnutrition presents itself in two types, described by Mott as "the flabby and corpulent, and the sallow, emaciated, rather cachectic patient with *arcus senilis*. These patients frequently complain of dyspepsia, flatulence, and intestinal troubles of various kinds."

In addition to these anæmic pains and to the characteristics of pulse and cardiac signs referred to, other symptoms referable to the anæmia and cardio-vascular apparatus are progressive weakness, shortness of breath upon exertion, præcordial distress or pain, vertigo and nausea. The following case illustrates this point well.

V. O.; male, age twenty-nine years; German; married; laborer at a blast furnace doing heavy shoveling, lifting, carrying and hoisting. Family history good, except that father dropped dead; cause unknown. Personal history: habits, smokes occasionally, chews to excess; takes three to five drinks of beer or whiskey daily, but has never been intoxicated. No diseases until the present. In December, 1902, he stopped work because he felt tired and the work exhausted him. On January 7th, while walking was seized with dizziness, nausea and a sensation in the chest which he described as a "squeezing of the heart." These attacks recurred several times but were always relieved by lying down. Physical examination revealed a man of good build and muscular development, with a mild degree of anæmia (4,000,000 erythrocytes, seventy per cent. hæmoglobin). He was passing 1,100 cubic centimetres of urine, specific gravity 1.029, urea 33 grammes; no abnormal constituent revealed by microscope or chemistry. The walls of all palpable vessels were thickened though the tension was



only moderate, the vessel tolerably well filled, regular, rate of eighty per minute. The heart was enlarged and slightly dilated; the first sound was weak and the aortic closure slightly accentuated. Although this case has not advanced far enough to show renal changes, the heart has already begun to dilate because the patient continued to work until he could do so no longer. It is an interesting case in that it shows that we may have serious cardiac failure even early in the disease.

I have thus briefly reviewed the symptoms of arterio-sclerosis as exhibited in the several organs, and systems of the body. The detailed description of each class is left to the succeeding speakers. In conclusion I would state, that if a patient presenting any one or more of the groups of symptoms described, shows in his history a hereditary predisposition to arterial disease, or has been exposed to one or more of the chronic intoxications, alcohol, lead, syphilis, gout and the so-called lithæmia, or shows evidence of renal disease or that his occupation exposes him to prolonged or severe muscular exertion, and the careful study of his heart, arteries and blood shows anæmia, abnormal sensation in the extremities, a pulse of increased tension, slowly rising wave with prolonged summit and slow descent, and slowness of rate with hypertrophy of heart, showing increase in length and strength of first sound and accentuation of the aortic closure, we are justified in our diagnosis of arterio-sclerosis.

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## II. ARTERIO-SCLEROSIS AND THE HEART.

By GLENTWORTH R. BUTLER, M. D.,

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The cardiac consequences of arterio-sclerosis may be divided into two groups, depending upon whether or not the coronary arteries are involved in the sclerotic process.

I. *Coronary arteries not involved*: If the coronaries are freely pervious and the heart muscle is in consequence well nourished, the main, and for a time the only, cardiac sequel of the general arterial disease consists in the development of a simple hypertrophy of the left ventricle. There may be little if any accompanying dilatation of the cavity. The obvious cause of the hypertrophy is the increased resistance offered by the thickened walls and narrowed lumen of the peripheral arteries whereby the work demanded of the left ventricle is largely augmented.

Cardiac hypertrophy is not a necessary result of arterio-



sclerosis, even if the latter is diffuse. In the so-called senile form of the disease occurring in persons over sixty years of age, with thin-walled, large, and tortuous arteries, often rigid and of the "goose-neck" feel, the heart is frequently not at all enlarged, or the arterial tension increased. The subjects are usually of the feeble "old man" type.

Arterio-sclerotic hypertrophy reaches its highest degree in middle-aged, sometimes quite young, robust and muscular men. In this class the heart averages fourteen ounces in weight, and may reach twenty-five ounces. The subjects are the victims of some chronic intoxication, or are large eaters, or have been forced to do hard and prolonged muscular work.

In course of time the simple hypertrophy is succeeded by dilatation, accompanied by a train of symptoms which are almost exactly those of the broken compensation of valvular disease. The resemblance is so close, even to the presence of a loud systolic murmur at the apex, that the case, unless previously seen, readily may be mistaken for one of organic mitral insufficiency. If the heart is capable of at least temporary recovery by rest and other treatment the murmur will, by disappearing, reveal itself as a relative mitral insufficiency due to dilatation of the mitral ring with resulting inability of the valve cusps properly to coapt.

II. *Coronary arteries involved:* When the coronary arteries share in the general sclerotic process there may follow, with or without antecedent hypertrophy, fibroid degeneration of the heart, angina pectoris, coronary thrombosis with sudden death, and, rarely, aneurism or rupture of the heart. Thrombosis, aneurism and rupture are mainly of academic interest and will not here be considered.

Of these sequelae chronic myocarditis is by far the most common. Indeed the fibroid heart practically is to be regarded as one of the diverse manifestations of general arterio-sclerosis, although it may arise from interference with the coronary circulation due to valvular defects, or may be part and parcel of a chronic endocarditis or pericarditis. The earliest symptoms which, when present, should arouse a justifiable suspicion of a progressing myocarditis are a sallow, pallid face, with enlarged venous radicles, premature grayness, a tendency to a wet and leaky skin, and a distinct loss of strength and energy. Moreover the pulse is apt to be weak by comparison with the strength

of the apex-beat, and is irregular or intermitting. Frequently there are cardiac contractions of such slight strength that while they may be perceived by auscultation they are not represented at the wrist by a pulse-beat—ineffectual systoles. Frequent gastralgic attacks, presumably referable to the closely allied innervation of the stomach and heart, are to be regarded askant. In more advanced cases anginal attacks, with an irregular, weak, often slow pulse (fifty to thirty) are rather characteristic. When the fibrotic heart muscle is losing strength and dilatation is increasing, dyspnoea, præcordial constriction, palpitation, cardiac asthma, and the signs of general venous congestion become manifest. In some instances vertigo, syncopal attacks, and recurring, occasionally fatal, pseudo-apoplectic seizures distinguish the history of the disease. The physical signs in an advanced case are those of a dilated heart, with a galloping rhythm, often also the systolic apex murmur of relative mitral incompetency to which reference has previously been made.

True angina pectoris is a rather rare symptom. It is almost invariably dependent upon sclerotic changes in the coronary arteries and myocardium. The arterio-sclerosis may be purely local, affecting only the root of the aorta and the coronaries, or may be part of a wide-spread process. In deciding whether a given case of breast-pang is or is not a true angina pectoris an extreme importance attaches to the careful examination of the heart and vessels. Presumptive evidence of true angina may be derived from the age of the subject, the symptoms, and the mode of onset of the attack, but unless the physical signs of sclerosis of the root of the aorta are present the diagnosis scarcely can be made. In cases of anginal pain attended by distinct thickening of the accessible arteries, increased tension, cardiac hypertrophy, and an accentuated ringing aortic second sound there is no difficulty in deciding that the attack is a true stenocardia. But when, as may happen, there is no cardiac hypertrophy and no palpable hardening, the judgment hangs entirely on the presence of heightened tension and especially upon the character of the aortic second sound. If the latter is accentuated, and if it possesses a peculiar, slight harsh or clicking quality at the instant of closure, a sign to be appreciated only by those reasonably well versed in auscultation, it is safe to decide that the angina is genuine and not false.

The gastralgic attacks to which reference has been made, have

with me assumed an extreme importance lest they should be, at least the precursors, possibly the initial symptoms, of a true angina pectoris. The first case which led to suspicions occurred a number of years ago in the person of an elderly woman who was fairly embarked on the down grade of degenerative changes. She was under observation for some four or five years, and complained almost constantly of dyspeptic symptoms, such as slight nausea, eructations, and a feeling of epigastric distress. From time to time she would have, as the result of worry, fatigue, or dietetic indiscretions, model attacks of gastralgia without anginose symptoms. The latter were of course carefully looked for. Finally she had a typical seizure of angina pectoris with pain and tingling in the left arm and hand, restrained breathing, immobility, cold sweat, and intense fear of impending death. The latter premonition was unfortunately too faithfully realized by her sudden death in a second paroxysm two or three days later. Since then I have regarded with misgiving all cases of frequent marked or painful gastric attacks occurring in elderly persons who present evidences of myocardial and arterial degeneration. Four or five cases have served to confirm this impression. There is now under observation a man sixty-odd years old, of large frame and flesh, a tremendous eater, although not a consumer of wine or spirits, who has had within three years seven severe gastralgic attacks. His heart is moderately hypertrophied, his arteries noticeably hardened, and the aortic closure has a harsh clicking quality, significant of atheroma involving the aortic segments and perhaps also the coronary arteries. Of late this patient becomes dyspnoeic upon exertion, accompanied by a marked sense of constriction in the chest, and his blood pressure is gradually rising. Moreover, at his last gastralgic seizure, a few weeks since, the pain radiated over the precordium and down the left arm to the elbow, presenting for the first time a distinctly anginal character. According to all indications the case is tending directly toward a genuine angina pectoris.

Several instances of the curious and interesting condition known as the Stokes-Adams syndrome have come under personal observation. The pulse is permanently slow (twenty to forty per minute), and the slow pulse is associated with peculiar vertiginous, syncopal, apoplectiform, or epileptiform attacks. As a rule the patients are elderly, and are the subjects of far-advanced arterio-sclerosis. Among the several hypotheses put forward regarding



the cause of this syndrome that which refers it to disease of the arteries of the medulla seems the most available.

Of the personally observed cases the most striking was one which occurred in the person of a man, sixty-eight years of age, a four-years' veteran of the Civil War. I saw him first at a time when he was confined to his bed because of dyspnoea and præ-cardiac oppression. He was propped up by pillows in a partly recumbent position, but sat upright and replied with much animation and many gesticulations to some preliminary inquiries. Without warning he suddenly fell back upon the pillows, the face became flushed, the eye-balls rolled to the left side, the pupils were contracted, and the respiration became rapid and stertorous, the cheeks puffing out with each expiration. In a moment the breathing gradually ceased, the face assumed a deadly pallor, the jaw dropped, the pupils became widely dilated and the pulse ceased. Neither by ear nor touch could any evidence of cardiac action be perceived. To all appearance the man was dead. Artificial respiration was immediately begun, but soon suspended while a stimulating hypodermic injection was prepared and given. After a lapse of time which is difficult to estimate, three minutes perhaps, a single pulse-beat was felt, followed by a feeble inspiratory effort, with a subsequent gradual increase in frequency and depth of breathing. The pulse-rate was, at first, four to the minute, then ten, then rose to sixteen within twenty minutes, and finally to twenty-four, at which it stayed thereafter. Consciousness gradually returned, being fully restored in about one hour, and there was no hemiplegia or other form of paralysis. Death occurred in a similar paroxysm about two weeks after the first seizure. During a part of this time the patient, a headstrong old man, occasionally rose from his bed and walked about the room. Examination showed him to be the subject of advanced arterio-sclerosis and myocardial disease.

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### III. ARTERIO-SCLEROSIS AND THE KIDNEY.

By IRVING PHILLIPS LYON, M. D.,

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General arterio-sclerosis and chronic interstitial nephritis frequently occur together in the same subject. Either may be the primary affection and produce the other as a secondary process. On the one hand, chronic interstitial nephritis, as a primary dis-



ease, leads to increased arterial tension, which in turn by its strain causes sclerosis of the arteries. On the other hand, general diffuse arterio-sclerosis, as a primary affection, may ultimately invade the kidney and produce its chief effects on this organ, causing either a patchy or a diffuse sclerosis, *i.e.*, chronic interstitial nephritis. Whichever disease is the primary one, the ultimate effects may be similar or identical.

The problem for the physician is to determine, in a given case, the primary from the secondary process, the cause from its effect. What differential criteria for this purpose are available? The chief points that may assist in the determination are found in the history of the case, the degree of arterio-sclerosis compared with the amount of the renal impairment, the sex, the age, and the course of the case while under prolonged observation.

In the history, all general and specific causes of arterio-sclerosis should be sought and weighed with reference to the sex, age, degree of arterio-sclerosis and urinary changes. Among such causes, syphilis, alcoholism, plumbism, gout and long-sustained, severe physical strain are of chief importance. These are the most common causes of marked arterial degeneration and, as such, point strongly to the arteries as the probable primary seat of disease. A marked history of these factors, one or more, may be decisive in the diagnosis, when considered with reference to the case in hand. Syphilis and alcoholism are the most frequent causes of marked arterio-sclerosis and can hardly be over-estimated in importance.

Sex is considered simply because the male sex is predominantly exposed to the action of the above-mentioned chief causes of arterial disease. Exceptionally any of these causes may be active in females and in such cases the history is usually positive.

The degree of the arterio-sclerosis compared with the amount of the renal impairment and the known course of the latter is the chief criterion. The history helps in this connection by furnishing a certain and plausible explanation of the arterial thickening. If the arteries show high-grade thickening, out of due proportion to the apparent kidney lesion, the case is one, probably, of primary arterio-sclerosis.

The course of the case under prolonged observation may materially strengthen such a judgment. If, when the patient is first seen, the arteries are hard, perhaps tortuous and nodular, and the urine shows slight or only transient pathological changes and under

observation for months or years there is very slow and slight increase in the renal lesion, such evidence from continued observation confirms the opinion formed on the first examination.

The age of the patient throws further light on the problem, for he is likely to be a young or middle-aged adult, if the arterial disease is the primary factor. At least this is often the case in those instances in which a differentiation of the primary from the secondary seat of disease is still practicable. This is explained by the fact that syphilitic and alcoholic arterio-sclerosis is developed usually in early or middle life, before the advent of senile degeneration. If, on the other hand, a less marked and more slowly developing arteritis extends into advanced life the distinction between primary and secondary arterial disease may be difficult or impossible.

We may conclude, then, that a case is one probably of primary arterio-sclerosis and secondary nephritis, when, with a history of syphilis, alcoholism, gout, plumbism, etc., in a young or middle-aged adult, usually a male, we find an advanced stage of arterial thickening out of due proportion to the apparent degree of renal impairment, especially if the latter shows only slight and slow increase during prolonged observation.

What practical value has the differentiation which we are attempting to make? None, so far as I am aware, in advanced cases in which treatment can be of little value, more, certainly, in less pronounced cases, particularly in men before the turn of life. In such cases we would not alarm the patient with a diagnosis of Bright's disease, nor would we treat the case as one of nephritis. We would not add to the strain of the stiffened arteries by ordering kidney flushings, sweat-baths, and similar drastic measures. We would not mistake a pulse of small volume for one of low tension and prescribe digitalis, as is so frequently done in these cases. We would not annoy the patient by too severely restricting his diet. We would frankly warn him of his true condition, that his arteries are older than his body by many years, that he must lead a quiet, rational, well-regulated life, avoid unnecessary excitement, strain, worry and fatigue, protect himself from wet and cold and sudden changes of temperature, dress warmly, eat and drink in strict moderation, give up all stimulants, protect his arteries from all undue strain, and that, if he will observe all these precautions, his chances of a reasonably long life are measurably increased. And finally we might use with benefit in selected cases

for long periods of time such drugs as nitroglycerine to reduce high arterial tension. Such, then, are the practical features of value in correctly interpreting the primary seat of disease, which should warrant the more general recognition by practitioners of the distinctions indicated.

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#### IV. ARTERIO-SCLEROSIS AND THE DIGESTIVE SYSTEM.

By CHARLES G. STOCKTON, M. D.,

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The subject of arteris-sclerosis, in its causative relations to diseases of the digestive apparatus may be considered under two heads: first, when, as a direct result of the sclerosis of vessels, arteritis obliterans or endarteritis, there follows a definite lesion of one of the digestive organs; second, when arterio-sclerosis, having produced disturbances in the heart, lungs, brain or kidneys, there are set up, as secondary manifestations, either structural or functional diseases of one or more of the organs of the digestive apparatus.

FIRST—LESIONS RESULTING DIRECTLY FROM ARTERIO-SCLEROSIS.

*Aneurism of the descending or abdominal aorta or of its branches* may exercise pressure upon the esophagus, the stomach or intestine, and thus give rise to obstruction; from this may ensue simple disturbance in function, or the pressure may give rise to atrophy, ulceration and loss of substance, accompanied by a train of painful and serious symptoms. Especially during the functional activity of the esophagus, stomach or intestine are these symptoms prominent. Not only does digestion become painful, but through dread of suffering, there is voluntary abstinence from food on the part of the patient.

*Embolism or thrombosis of the vessels supplying the abdominal organs* may give rise to serious results. This is particularly true of the classic obstruction of one of the mesenteric vessels when there develops gangrene of the intestine and a chain of symptoms not always correctly interpreted. The condition has been mistaken for acute pancreatitis, obstruction of the bowels, appendicitis, perforation of the intestines, etc. The real diagnosis is often overlooked. One usually finds abdominal pain and tenderness, vomit-



ing, moderate tympany, tension of the abdominal walls, and diarrhoea accompanied by marked constitutional symptoms, briefly described in the phrase "abdominal shock."

*Gastric Ulcer*, it has been held from time to time, may depend upon arterio-sclerosis. Virchow long ago called attention to the fact that thrombosis of vessels in the gastric mucosa, leading to hemorrhagic necrosis, would, in the presence of active gastric juice, result in a peptic ulcer of the stomach. This he demonstrated, and it has subsequently been shown at numerous autopsies. Of course, this accounts for only a small proportion of all gastric ulcers. Arterio-sclerosis, however, is by some held responsible for another form of gastric ulcer, and the subject is undergoing discussion in recent literature. I refer to a condition in which there is practically obliteration of a comparatively large branch of one of the vessels of the stomach so that inosculation is made impossible and a relatively large tract of the gastric mucosa is deprived of arterial blood. This condition must be rare for its occurrence is denied by some experienced clinicians. Riegel, for instance, refers to it, but doubts its existence. This was my own view until I saw the evidence presented by Dr. H. U. Williams at a recent meeting of the Buffalo Academy of Medicine. The patient, a woman, forty-eight years old, died at the Erie County Hospital of what was presumed to be carcinoma of the stomach. At autopsy marked arterio-sclerosis was found, aneurism of the arch of the aorta, and, as a result of the obliterating arteritis, the blood supply to a considerable area of the gastric mucosa was interrupted. In the center of this area was a large gastric ulcer from five to eight centimeters in diameter, irregular in form, but having the characteristic punched-out appearance, without evidence of inflammatory reaction at its border. This is one of the largest ulcers that I have ever seen. From careful examination of the specimen I am convinced that it resulted from the cause above described, and it may be possible that the very large ulcers of the stomach, occasionally observed past middle life, result from this condition of arterial disease more often than is generally supposed.

In the *Wiener klinische Wochenschrift* for September 18, 1902, Neusser of Vienna has reviewed the gastro-intestinal disturbances that occur in arterio-sclerosis and has collected some of the literature on the subject. Schrötter is quoted as describing a number of cases in which *meteorism, colic and other disturbances* were ap-



parently traced to deficient blood supply in the regions involved. These attacks developed when the functional activity of the part was put to strain. He likens the behavior of the intestine to that of angina pectoris when the myocardium is in a state of ischemia from coronary disease. He found that his patients improved by the administration of the nitrites. The conclusions reached by Schrötter seem to be logical, and since reading his article I have had personal experience with a case which I believe is somewhat similar. The patient, a middle-aged woman, complained of pain in the region of the umbilicus two hours after eating. There were also some meteorism and a sense of stoppage. Her gastric secretion was somewhat depressed, but this did not seem to me adequate to account for her symptoms. She was not relieved by dieting nor by the usual remedies employed for her gastric condition. She was, however, promptly benefited by nitroglycerine. In the same article Ortner is quoted as having observed a similar case in which it was particularly noted that there occurred lessened peristalsis. At autopsy there was found atheroma of the ascending aorta, abdominal aorta, arteries of the stomach, and also of the superior mesenteric artery. The subject is so new, and the evidence afforded by autopsy is still so meagre that it is unwise to come to an immediate conclusion concerning it. It is not improbable that many cases of abdominal disturbance may depend upon the direct result of arterio-sclerosis; but it must not be forgotten that in these same cases, the indirect effect of circulatory disease may produce symptoms quite similar in character. When, however, it is found *post mortem*, that the intestinal blood supply was greatly diminished as the result of vascular disease, it is proper to assume that the history of abdominal symptoms is to be explained by arterio-sclerosis.

*Cases of marked abdominal symptoms in which it is doubtful whether these arise from the direct or indirect result of arterio-sclerosis.* There is a comparatively large group of cases of arterio-sclerosis that suffer from symptoms referable to the stomach or the intestine, or both, and which from one point of view seem to depend upon insufficient blood supply to the digestive organs. But from the fact that at the same time these cases suffer from general circulatory disturbance as well as from renal insufficiency, it seems hardly warrantable to assume that the symptoms are solely the result of local ischemia in the digestive tract. This subject is best illustrated by the report of cases.

*Case I.* An aged physician who saw service in the Civil War, where he suffered from malaria, was subsequently in perfect health; a splendid specimen of manhood, six feet tall, weighs 206 pounds, and in most respects shows good preservation. For two or three years past he has been somewhat short winded in walking rapidly or going upstairs. For several months past he has slight dyspnoea and occasionally precordial pain caused from excitement. One month ago, after a hearty evening meal, he went to sleep in an open camp. The night became cold and he was awakened with intense pain in the precordial region, dyspnoea and vomiting. He had previously had attacks of pain which had been relieved by vomiting; this time the vomiting did not relieve him. He took whiskey and succeeded in reaching home in a very depressed condition. During the succeeding four weeks, until he visited me, he abstained from eating solid food and took liquid food scantily. He was especially afraid of starchy food, and felt positive that solids and the starches in particular caused pain in the epigastrium, accompanied by shortness of breath. The physical signs showed arterio-sclerosis, the left border of the heart just outside the nipple line, the apex somewhat diffused, with an unusual cardiac impulse in proportion to the cardiac sounds, which were feeble. The first sound at the apex was especially weak, the second louder and of a very high-pitched, ringing character. The sounds at the base of the heart were feeble, the aortic second was extremely high-pitched and valvular. The heart was intermittent and irregular in action; the area of hepatic dulness was somewhat narrow. The urine was not diminished in quantity, had a specific gravity of 1.011, but contained only twelve grammes of urea in twenty-four hours and an occasional hyalin cast. He was treated by frequent minute doses of nitroglycerine, 1-400 of a grain hourly, and the application of thermal baths. Subsequently, small doses of potassium iodide were given. The diet was progressively increased, and after three weeks he returned home able to eat a moderate meal in comfort. He has since informed me that he is able to eat provided he does not exercise, and to exercise provided he does not eat.

The second case illustrates a somewhat different phase.

*Case II.* E. C. W.; aged forty-six years; manufacturer; denies venereal disease. He first consulted me in 1896, complaining that for the past year or more he had had attacks of abdominal pain and distension coming on about midnight, accompanied by restlessness. His physician had to be summoned to relieve him by hypodermic injections of morphine. He showed a very marked arterio-sclerosis; had lost in weight and color. The pulse, though tense, was frequent; the cardiac apex diffused, extending one-half inch to the left of the nipple line; the aortic second sound was *very* much exaggerated; there was no bruit. He voided sixty-four ounces of urine in twenty-four hours, containing sixteen grammes of urea, and an occasional hyalin cast. The stomach contents, three hours after a test meal, showed a total acidity of III. of which 71 (or twenty-five hundredths per cent.) depended on free hydrochloric acid, combined chlorides 20, and acid salts 20. Alkalies were given for the hyperchlorhydria,

potassium iodide in small doses, and thermal baths for the relief of the arterio-sclerosis. It is now seven years since the patient first consulted me. He has been free from trouble so long as he has occasionally resorted to the original line of treatment; sometimes it has been found necessary to give him nitro-glycerine. It is fair to state that his symptoms were not those usually seen in hyperchlorhydria. I am not satisfied that the renal inadequacy was sufficient to produce these attacks. I am inclined to think that the arterio-sclerosis has given rise to intestinal ischaemia and is chiefly responsible for his seizures. It should be noted that the complaint was mostly intestinal distension and pain below the stomach, the bowels at the same time becoming inactive. Such cases, while not common, are met with sufficiently often to make further reports unnecessary.

#### SECOND — GASTRO-INTESTINAL DISORDERS INDIRECTLY RESULTING FROM ARTERIO-SCLEROSIS.

Arterio-sclerosis is indirectly a common cause of gastro-intestinal disorders. To prove this it is necessary only to cite the familiar condition of *secondary dilatation of the heart, and succeeding venous stasis*, which gives rise to distension of the portal system and congestion of the abdominal viscera. Irritation and mild catarrhal inflammations of the stomach and intestine are met with, and disordered secretion and disturbed motion are commonly present.

Another group of cases is to be attributed to the *interstitial nephritis* which so often forms a part of general arterio-sclerosis. The resulting uremia gives rise to a great variety of symptoms both in the stomach and intestine, which are so well recognized that it seems fruitless to review them here.

There is a *form of colitis* to which Delafield some years ago directed attention, which appears to be the direct result of chronic interstitial nephritis, or, in other words, of arterio-sclerosis. The colitis is of an ulcerative type, and not infrequently proves fatal, but clinically is represented by the familiar picture of chronic colitis. I have known cases in which the intestinal symptoms were inconspicuous, although the lesions of the colon were unquestionably the direct cause of death, as shown *post mortem*.

*Coronary disease of the heart and the digestive apparatus.* Among the direct effects upon the digestive apparatus produced by arterio-sclerosis is the somewhat unusual one of intense abdominal pain generally referred to the pit of the stomach and closely resembling gastralgia. The first case which came under my observation was seen in consultation with Dr. DeLancey Rochester of Buffalo, and was that of a woman about sixty years

old who was seized in the night with terrific gastralgia which was not easily controlled. The heart action was not especially disturbed, and this organ at first was not suspected as the seat of trouble. The pain recurred from time to time during a period of about three days when the patient suddenly expired. The post mortem revealed an extensive coronary disease with rupture of the left ventricle near the apex, and the over distension of the pericardium with blood escaping through the ruptured ventricular wall. A second case, almost precisely identical, I had occasion to observe in the person of a well-known physician of western New York. The particulars of two other very similar cases have come to my knowledge. In the first case there was nothing to attract attention to the heart, but in the second case the proper diagnosis was made. The only gastric symptoms present were those of gastralgia.

CONCLUSION: In concluding this brief paper, I wish to say that I have gone over with considerable care the recent cases in my record book to find the proportion of cases of arterio-sclerosis in which complaint was made of symptoms of disease of the digestive apparatus, and find that the proportion is large, namely about sixty per cent. This proportion, however, is misleading for the reason that many of these patients consulted me primarily because of symptoms of abdominal disease. It would be interesting to know the frequency with which gastro-intestinal disorders develop in all cases of arterial disease. The belief is growing that arterio-sclerosis is more frequently the direct cause of disease of the stomach than we had formerly supposed. As an indirect cause of many digestive disorders the arteries have long been held justly responsible.

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## V. ARTERIO-SCLEROSIS OF THE NERVOUS SYSTEM.

By WILLIAM BROWNING, M. D.,

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Of recent years neurologists have been giving an increasing share of attention to this condition and its results. In fact, as so often with subjects, even scientific, that are being boomed, a distinct inclination may be noted to do as the politicians, "claim everything" under this head. A portion of these sweeping claims may prove warranted, but it is certainly time for conservative judgment.



If we exclude from consideration the grosser secondary effects (as softening, hemorrhage, etc.), is it possible to isolate a picture of arterio-sclerosis pure and simple, to specify manifestations directly attributable to that condition or its immediate effects? This might be possible, even though the disorder never, in fact, occurred in a pure form. There are, however, often doubts whether these manifestations are of such simple mechanical origin, especially as certain agents not only cause this trouble but are also capable by themselves of producing nervous disturbances. It must consequently be granted that an element of uncertainty still exists with regard to many of the interpretations, even to such as are based on pathological findings.

If, instead of saying that these symptoms are due to arterio-sclerosis, we tentatively say merely that they are more or less often associated with it, we can proceed with the subject unhampered.

The most that can be attempted here, besides offering a convenient classification, is to summarize the symptoms attributed to this cause and briefly comment thereon. It will not be possible to consider different stages nor finer subdivisions that have in part been proposed. The selection of type forms does not, of course, preclude the occurrence of intermediary and irregular cases.

It is recognized that this process may expend itself specially on the cerebral vessels. And, more than this, that it does not equally affect all the vessels even there.

Doubtless clinically we as yet bunch a number of more or less distinct processes,—atheroma, arteritis and endarteritis, perivascular gliosis, arterio-sclerosis, etc.,—under the one heading.

1. In the first place, changes in the peripheral nerves have been described that were attributed to local disease, in part arterio-sclerosis, of the vessels of the extremities. The nerve trouble was interstitial rather than parenchymatous, however, and has little relation to the other forms to be described. (Lapinsky, *Deutsche Zeitschrift für Nervenheilkunde*, 1898.)

The condition called intermittent limping or claudication (angina cruris of Walton) is found to depend on local arterial changes, in part also of this character,—though calcareous arteries, nicotinism, rheumatism, etc., are more important factors.

As a whole, these peripheral matters have not as yet assumed much clinical importance.

2. Next, we come to the spinal symptoms of arterio-sclerotic

origin. These in part have been attributed to involvement of the spinal vessels themselves, in part to that of vessels higher up.

Demange was, perhaps, the first to call attention to this phase of the question. He reported autopsies in some cases (*Revue de Medicin*, 1884, No. 10,—1885, Nos. 1 and 7). He figures diffuse scleroses not of the insular form as definitely of arterio-sclerotic origin. Clinically a symptom-picture analogous to that of lateral sclerosis was produced by the morbid process.

It was to cases of this kind that the writer referred when discussing the pressure effects of the column of cerebro-spinal fluid in the upright (page 20 of "Circulation in the Central Nervous System"). "In the feeble and senile the finer nutrition of the yielding structures of the lower cord and its roots may indeed suffer. This suggests itself as one cause for certain cases of senile paraplegia, in which the upper extremities are fairly intact." Eventually, however, the upper extremities do show motor weakness and decided increase of the tendon reflexes.

Last year Hirsch, of New York, described something of this kind at the meeting of the American Neurological Association.

Without doubt these accounts refer to a definite clinical group of cases, whatever may be their source or explanation. The subjects are usually persons of fine physique, but in the declining period of life. The tendon reflexes of the lower extremities and then of the upper become decidedly exaggerated both in force and numbers, although without clonus. An increasing muscular weakness accompanies this, but no loss of sensation. For a time the mental functions appear unimpaired, but later in the case may suffer some also in a very general way. The gait is shuffling rather than pronouncedly spastic. As has been suggested, this condition might be due to interference higher up than the cord. Yet except for the late mental impairment, we see something not widely different from this type in spastic spinal syphilis. And in one of my cases the woman's father had died of tabes.

Therapeutically it is noticeable that these cases yield to a different line of remedies from those of most use in the brain-forms. Vaso-dilators, the strychnine group, strophanthus, are specially helpful and often serve to tide the subjects along for an added couple of years of activity or tolerable existence.

Other spinal forms of arterio-sclerosis including systematized cord-troubles (Redlich) have been described, but can not be dwelt upon.

3. We now come to the larger question, viz., that of the brain-forms. It is convenient here to distinguish a progressive or severe type, and a common or simple and better known form.

I.) In the former the symptoms are gradually progressive or run on in a fairly even manner, and the cases take an earlier fatal ending. It is here also that we may class the organic paralytic forms. Here are many cases like those studied by L. Jacobson, in which the end-arteries to the pons or to the internal capsule are specially involved; in such it is but natural that striking permanent injury should occur.

From various histories it appears that this type often shows a syphilitic or traumatic etiology. Such cases are not much responsive to treatment, even if instituted before definite injury.

II.) In the ordinary and best-known type the manifestations are of varying character and importance. One time with another a multitude of symptoms may be noted, some of minor account. Many of these may set in suddenly and within a few minutes, hours or days subside leaving nothing definite or only a minimum of the threatened trouble. These, however, either tend to recur, or in some cases may be more or less continuous. Whatever is left from time to time depends presumably on the limited extent of permanent damage done before circulation was re-established in some area.

The signs suspected of having some relation to or to be suggestive of this condition include: dizziness usually slight and diminished by reclining, feelings of nausea, or rarely there may be actual vomiting, tinnitus aurium with changes in audition even to the hearing of distinct sounds, transient aphasias,<sup>1</sup> also paresis or paræsthesias of an extremity or side, motor weakness of both sides (di-paresis), a tendency to pitch or fall, irregular clumsy or tremulous movements, faint turns, hebetude and sleepiness, especially dropping asleep in a chair or at work even in the forenoon, an inability to stand much loss of sleep, less often insomnia, flying pains about the head, particularly the forehead, or more general headache, a feeling of pressure or heaviness in the head, impairment of memory, "nervousness," rarely periods of irritability, great excitement or mental confusion, lack of accustomed energy, failure of quick mental initiative power, increased obstinacy, a tendency to depression and melancholia or great fear

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<sup>1</sup> The more highly organized and delicate the brain function the more likely it is to suffer involvement. Hence passing aphasias, agaphias and incoordinations are not uncommon.

of losing the mind, intolerance of mental strain, alcohol or tobacco although there may be an increased craving for stimulants; in a few cases epilepsy or convulsive phenomena, not rarely Jacksonian in character ("senile arterio-sclerotic epilepsy"), sometimes an injurious influence from hot weather, etc. Until the condition, however, is advanced there is not usually any gross impairment of mentality. The particular symptoms in an individual case depend largely on the areas involved.

There may be ocular symptoms of great import. This is but natural, as the retinal supply comes from the cerebral carotid and is closely analogous to that of the brain itself. Some of the special anatomical conditions favoring this have recently been studied by Liebrecht (*Archiv für Augenheilkunde*). And Otto has described four cases depending on pressure by the changed carotid or ophthalmic artery on the optic nerve.

Flickering before the eyes or transient blurring of vision, and, according to Vogt (1902), contraction of the visual field in most of the advanced cases and sometimes in others presenting definite evidence of arterio-sclerosis.

Of great diagnostic importance have been found special alterations, haziness, etc., about the retinal vessels. There may be "A tortuosity of the *smaller retinal* vessels, and of their *terminal twigs*." Perhaps allied to this is the occurrence of transient spasm in the retinal vessels (Dr. Ole Bull), or local and fleeting contractions of the same. It has become a matter of prime importance to have the aid that can be furnished by a competent ophthalmologist, towards early diagnosis and the corroboration of our suspicions, particularly where imperfect elimination is in play (Raehlman, unpublished paper of Alleman of Brooklyn, and others).

As many of these manifestations are similiar to those seen in neurasthenia the possible identity of the two, at least in certain cases, is claimed by some authorities, while other good writers argue strongly against this view or take a middle stand. It is at about the middle period of life that many cases of neurasthenia occur, and it is at about that time that arterio-sclerosis often begins to make itself felt,—although in many cases as now appears, beginning even much earlier. It must be granted that incipient arterio-sclerosis plays a part in many cases classed symptomatically under neurasthenia,—a fact not at all negatived by their apparent recovery.



Much the same statement applies to the so-called traumatic neuroses. The development of serious trouble in consequence of slight trauma has been claimed (*e. g.* by Windscheid, *Münchener medicinische Wochenschrift*, 1902) to depend upon previously existing sclerotic changes in the brain-arteries. This may apply to certain severe cases. But it is evident that in the traumatic-neurotic the disturbed vaso-motor innervation must lead to abnormal variations of arterial pressure and of itself favor the development of arterio-sclerosis.

The interpretation of the various symptoms enumerated depends largely on their relation to a number of co-ordinate matters quite as definitely suggestive of advancing arterio-sclerosis, as well as on the existence of known causes. A few may here be mentioned.

It will be seen that many of these signs might merely indicate senility or the presenium, or be due as above noted to the direct action of some of the causes of the arterio-sclerosis itself (uric acid, senile lithæmia, sluggish excretory functions, abuse of alcohol, nicotinism, plumbism, syphilis, sexual excesses, overeating, etc.). Old age favors it, although middle life and even earlier may not be exempt especially where heredity plays a rôle (E. D. Fisher, and others).

As to uric acid, it is just possible that the cart is sometimes put before the horse. Clinically it appears so often evident, not that uric acid has to any great extent caused the outbreak of symptoms, but that the nervous strain and overwork have developed uric acid, the latter in turn doubtless augmenting matters somewhat.

As to arcus senilis, I am forced to doubt its bad omenship. Tortuous temporals and hardened radials have but a limited bearing, for as stated by Alzheimer (*Neurologisches Centralblatt*, 1902, p. 420), "The parallelism between arterio-sclerosis of the central nervous system and of the remainder of the body is far from being constant."

When the process is far advanced and diffuse, a general increase of the tendon reflexes, particularly those of the lower extremities, is common.

Besides these points we at times find aid from the various circulatory, respiratory, cutaneous and allied matters considered by the previous speakers.

## TREATMENT

1. The open-air life. This usually carries with it a certain amount of light exercise.
2. A let-up of mental and physical tension, but not always entire relaxation from activity.
3. Laxatives, particularly salines and sulphur waters,—the latter only for specified periods.
4. Proper hours of sleep.
5. Limitation or interdiction of alcohol and tobacco.
6. Some regulation of diet.
7. Anti-lithic remedies, including the well-known iodide.
8. In some cases certain drugs already mentioned.

We hear mostly of its bad portent. But it is well to remember that, while it is a degenerative or senile affair, it is not necessarily without great remissions in symptoms, especially when recognized and cared for, and may continue as merely a handicap for many a year. This fact is established not only by clinical but by pathological evidence.

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VI. ARTERIO-SCLEROSIS AND MENTAL DISEASE.

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Among the functions of the nervous system there is one large group of vital importance, but at the same time of perplexing difficulty of explanation, the mental life of the individual. That we should single it out from among the other functions of the nervous system, has its good reasons. It is partly because the mental life is in itself the most important function, and because it depends on a fairly definite part of the nervous system, one much more difficult to understand in its totality than the peripheral nerves and spinal cord or medulla and the so-called motor and sensory centers by themselves. This singling out comes moreover from the fact that the study of mental disorders is almost exclusively left in the hands of the few physicians who devote themselves to psychiatry. Physiology and medicine give little instruction to the practitioner in these directions, probably because they still are too complicated and not easily made teachable. The arrangement of this

symposium left this most difficult topic to the last, and it did so with good justification. There is not much to be offered that would be of much value from the point of view of treatment of arterio-sclerosis. The *consequences* of the effects of arterio-sclerosis on the mental functions are, however, of great *practical* importance and we shall briefly review them.

We have heard of the rôle arterio-sclerosis plays in the life of the blood-vessels, the life of the heart, the life of the kidney, the digestive system, the nervous system in general. Like every other organ the part of the nervous system which is the organ of mental functions, has its distinct biotrophy or vital elasticity characteristic of the individual and often enough of many members of the same family. It ages more or less independently, and it may, moreover, suffer through arterio-sclerosis in chiefly the following three directions:

1. From the effects of a reduction or change of metabolism due to arterio-sclerotic disease of some other organ or organs—the heart, the kidneys, etc.;

2. From disease of its own vascular mechanisms, especially sclerosis of the larger or smaller vessels of the brain;

3. Or it may remain behind in its own metabolism owing to exhaustion of the vital elasticity of the nerve-tissues proper, especially when more trying demands are made upon it through toxic substances or stress. These factors should be considered in a diagnosis, if by diagnosis we understand not a mere name but a statement concerning the nature of the disease, the causes, and their working, and possible clues concerning means of repair.

Our first question is therefore: Are there any mental disorders due to arterio-sclerosis of other organs while the brain as such shows no arterio-sclerosis?

Such disorders occur, but they are usually symptomatic, *i. e.*, they disappear with the removal of the cause, and they are not very frequent. I refer to certain types of delirium known as uræmic delirium which, in rare cases, may last a considerable time. These states do not really differ from delirium in states of uræmia of non-arterio-sclerotic origin. I am, however, strongly under the impression that the frequency of mental derangement attributable to lesion of the *kidney*, is usually exaggerated. While, undeniably, the persons who show arterio-sclerotic involution of the brain usually also show the same disorder in the kidney, the reverse is **hardly the rule**.

Arterio-sclerosis of the heart and the aorta are also very frequent in the insane; but it is not often that we can lay any mental disorders directly to the door of these affections. Disorders which might belong here are difficult to explain; thus I have seen embolism from the aorta with apoplexy and hemiplegia and death preceded by several days of delirium, without there being any evidence of an embolism preceding the fatal one.

We only begin to have safe ground under our feet where we have reason to suspect arterio-sclerosis of the brain itself, and even there we meet with much difficulty when trying to distinguish between what is to be accounted for by the blood-vessels and what by the simple abiotrophy, or senile reduction, of the organ and its function, in which arterio-fibrosis is merely a concomitant fact.

We briefly review the forms of insanity occurring after the age of forty-five, and ask in which we have reasons to suspect cerebral arterio-sclerosis?

First we meet with all those forms which may occur at any age; alcoholic insanity, general paralysis, usually due to a previous syphilitic infection; further, exhaustion-deliria, and that large group of patients who have a number of attacks in their life usually depressive or exalted or mixed, *i. e.*, the cases of manic-depressive insanity; further forms of paranoic or delusional states, and forms of deterioration.

As specially characteristic of that period we find anxious melancholia, and certain paranoic states of a hypochondriacal basis or turning around property questions. Of all these diseases we know that they may occur without any arterio-sclerosis.

The specifically senile psychosis practically always associated with arterio-sclerosis, is, however, one of general mental reduction and apparently a fairly independent condition. The senile reduction of the mind is a phenomenon from which few people escape completely in old age, and which is apt to show prematurely in some. This is usually part of the general senile involution. We possess very interesting studies on the effect of this process on the mental functions. In ordinary life we notice the decrease of memory, a tendency to follow ruts of thought and to rehearse them, a certain narrowing down in interests and in the grasp of new things. Ranschburg has made a careful psychological comparison between the functions in ten young men and eleven old men of the same level of education and society. He found that the old men perceive



sensations about thirteen per cent. more slowly, reactions involving choice take forty-four per cent. longer than in the young; in simple calculations the old men were thirteen per cent. slower, but they made slightly fewer mistakes. The slowness may be accounted for by the greater slowness in reading; obviously, calculation does not suffer as much as the hearing and reading of the figures. Judgments tested by the question whether a name shown referred to something living or lifeless were given seventeen per cent. more slowly by the old, and the mistakes were twice as numerous as in the young. The drift of associations of words is fifty-four per cent. slower and the associations are made very largely according to sense and especially according to causal or purposive relations, not according to similarity of sounds or other free or accidental relations. There is obviously less elasticity and a limitation to relations which experience has impressed over and over again. This is in harmony with the reduction of free imagination in old age. This general factor which seems to be independent of actual arterio-sclerosis marks most old people.

Without evidence of a certain definite form of deterioration and dementia, the various forms of mental disorder have *relatively* the same prognosis as in earlier life, if at least, we make allowance for the increasing loss of recoverability in old age. Well-founded suspicion of arterio-sclerosis exists, however, when an ominous deterioration begins, with a gradual loss of memory, a narrowing of judgment, and transitory states of confusion, often with delirium of occupation, and without the cardinal symptoms of general paralysis.

The loss of memory which affects mostly the immediate past makes the patient repeat himself and leads to difficulty of grasp on the situation; the patient loses himself temporarily, gets confused, and especially at night, is unable to find himself, and is apt to develop outbreaks of anxiety, often with frightful hallucinations. At times the gaps of memory are made up for very liberally by confabulations. The patient does not remember what time of the day it is, but says he just has been down town, claims that friends have just been there, etc. Frequently he shows an aimless desire for activity, and in the confusion he rummages in the drawers or collects useless articles and conceals them in the clothes or beds; or one of my patients who was invited to dinner, failed to come to the parlor and it was found that he had undressed and gone to bed, instead of simply putting down his overcoat and

getting ready for dinner. Or, even in the beginning of the disorder, criminal acts occur, such as exhibition of sexual organs, or other sexual misdemeanors, stealing, putting fire to places through carelessness. These not infrequently are the outcome of the peculiar perplexity or bewilderment which shows also in the fact that the memory for the act may be missing, as in an otherwise fairly preserved case at the Worcester Hospital; a patient who killed his wife, and continually wondered why she did not come to see him. Not infrequently the delirious states are transitory at first, chiefly nocturnal, whereas the fundamental defect of memory and judgment which is not accounted for by temporary confusion and perplexity, is as a rule lasting or progressive.

We often see increasing self-absorption with hypochondriacal complaints partly built on the natural fear of becoming unable to control the sphincters, but also exaggerated to claims that the internal organs are absent, stools have not passed for months, etc. A feeling of helplessness leads to ideas of persecution, fear of being mutilated. Property questions are prominent and are apt to show the patient very unreasonable.

In the prognosis of mental disorders in old people the existence of arterio-sclerosis of the radial, of the kidneys, arcus senilis, tremor, senile atrophy of the skin, tottering gait, are not absolute evidence of similar involvement of the brain, but must be taken as evidence of a serious danger. Certainty of a process of cerebral atrophy comes only where we have positive signs of dementia or focal disease.

It is impossible to-day to say to what extent cerebral arterio-sclerosis as such is actually the *cause*, or simply a *part*, of the general involution. After all, the only symptoms which can be laid more directly to the changes in the blood vessels are those of a focal nature, which have already been discussed by Dr. Browning, such as the occurrence of apoplectic attacks of various extent, the appearance of symptoms from focal lesions and the vaguer symptoms, such as circulatory difficulties, dizziness, and occasionally neuralgias of a whole side of the body. My conclusion concerning the insanity would be that we have no means at present to speak of arterio-sclerotic insanity, but only of insanity of senile or prematurely senile involution, and that the real arterio-sclerotic nature is only revealed by the course, and by the nervous and collateral symptoms of focalized or general arterio-sclerosis. The so-called organic dementia following apoplexy is usually a

compound of the effects of direct focal destruction of brain and diffuse changes. In rare cases though, it would seem as if a focal lesion as such might cause a transitory mental disorder. But these cases are difficult to analyze and one should be careful with the frequent statement that a "little hemorrhage" or "embolism" is the cause of a transitory mental disorder.

As a rule the weight of the brain is very much reduced in old age and this reduction keeps pace with the dementia, so that in the simple delusional forms and in many cases of senile melancholia, we find the brain weight relatively high, whereas actual *dementia* is accompanied by a fairly parallel loss of weight. In many cases the atrophy refers more especially to special localities, such as the temporal lobe, and without there being any focal lesion whatever, of the nature of blocking of circulation or softening, we can obtain fairly pure symptom-complexes of aphasia in such cases with local atrophy. Even in these cases it is not always easy to demonstrate a parallelism between the atrophy of the part and the condition of the blood vessels feeding it. It is impossible to draw a line between the cases of simple atrophy of the brain and those of atrophy with focal lesions, except where lesions implicate a part which we can recognize by its focal symptoms during life. In other words, the vascular nature of the dementia can be diagnosed only on the existence of distinctly vascular symptoms.

As a rule the vascular lesion affects chiefly the vessels of the base; at times, however, it extends into the smaller branches and very diffuse changes are possible, such as multiple small aneurisms and hemorrhages, not only in the place of predilection (the internal capsule) but in various parts of the cortex. One of these patients had affection of the cerebellar vessels as well as those of the cerebrum, and the condition of ataxia produced in this way had erroneously led the committing physician to the diagnosis of locomotor ataxia, which was easily excluded owing to the presence of exaggerated reflexes referable to the affection of the motor area and pyramidal tracts. The difficulty of distinguishing such cases from general paralysis is at times great, especially in the absence of a history of the development.

Among my autopsies I make the following groups:

1. Cases with focal lesions such as softening, hemorrhage, or temporary ischæmia, or focal simple atrophy, causing hemiplegia,

aphasia, or hemianopsia, demonstrable during life with varying degrees of general atrophy and dementia.

2. Cases with foci of softening which give no focal symptoms. I mention here especially the numerous small cysts which occur in the corpus striatum or in the centrum ovale, many of which may make no symptoms whatever, whereas others may encroach on the pyramidal tract and, when they involve the anterior limbs of the internal capsule, not infrequently bring about a peculiar condition of irresistible crying or laughing, which practically allows a diagnosis of this focal lesion.

3. Cases with multiple very small foci of softening, especially of the cortex; several of these cases developed epileptic attacks during the last years of their life.

4. In other cases the lesion is fairly uniform and diffuse; usually a hardening and uneven shrinkage with overgrowth of the neuroglia, pigmentary atrophy and disappearance of whole nests of cells, widening of the ventricles and formation of so-called arachnoid cysts, owing to the shrinkage of the brain substance.

Therapeutically little is to be done beyond what all mental disorders require; provision for safe and simple conditions of life, the avoiding of encumbrances in the intestinal tract, and of states which naturally increase the blood pressure, such as worry and anxiety.

The principal value of our knowledge of the disorder is undoubtedly the prognostic one, and that of early recognition of danger in business transactions, and naturally also the avoidance of confusion with syphilitic processes, which would demand specific measures.

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## VII. PULSUS INFREQUENS.

By THOMAS E. SATTERTHWAITE, M. D.

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In looking over the literature of this subject lately, I found no less than thirty-eight American physicians had contributed to it. Perhaps many more have done so. And foreigners have added their proportion. So that it is evidently a subject that has created a wide-spread interest. And it is bound to increase until we have mastered the essential facts in its causation, natural history and treatment.

By way of introduction, I may say that the prevailing termin-



ology of this affection is unfortunate. I refer to the words *Bradycardia*<sup>1</sup> and *Spanocardia* that are in use, and *Araiocardia* and *Oligocardia*, that have been suggested.

The use of the termination *cardia*<sup>2</sup> implies that the key to the actions of the arterial current is to be found, from a clinical point of view, in the heart, rather than in the peripheral arteries. And yet a comparison between the readings of recording instruments that register the heart and pulse beats simultaneously, as shown by Mackenzie<sup>3</sup> and others, illustrates that there may be a wide variation as to frequency and rhythm between the two.

To illustrate, a double contraction at the left ventricle may be registered in a sphygmogram, as a single one; while a cardiogram will show cardiac contractions of which there are no traces in the sphygmogram. This latter circumstance, characteristic of the "intermittent pulse" (to be distinguished from the "deficient pulse" where both cardiac contraction and the pulse beat are simultaneously "missed") is of course very common. Now though the heart regulates the general circulation, its essential characteristics are better exhibited at the periphery than at the center. And for two reasons. The peripheral arteries are more accessible, and therefore can be more conveniently studied than the heart, and give us more information because cardiac action studied at a distance, can be better appreciated. It is not uncommon to judge of motive forces by their remote effects. In telegraphing or telephoning, the one who transmits the message cannot judge of the quality of his instrument, so well as the one who receives it. Clinically, therefore, the circulation is better estimated by the pulse than by the heart. So that there is a reasonable objection to the use of all terms ending in *cardia*. But apart from this, the qualifying prefixes are either improper as in the use of *brady*, or are vague in meaning. True *Bradycardia* implies that the ventricular contraction is prolonged beyond the usual time, that it is slow, in other words; but so far as I know, slow ventricular contraction occurs only in aortic stenosis or in aneurisms near the aortic orifice, where some obstruction like an atheromatous plate narrows the lumen of the vessels, the contraction of the left ventricle being necessarily prolonged, in order to permit it to force the column of blood through the constricted passage.

But this is not the common acceptance of the term, which is simply that the number of pulse beats to the minute is abnormally small. As a matter of fact, however, pulse beats, in the infrequent pulse, may be quick or slow.

To my mind of all the terms suggested, no one expresses this numerical deficiency so well as the Latin *Pulsus Infrequens*, the infrequent pulse.

The pulse rate, as is well known, varies more or less according to circumstances, such as the age and height of the individual, atmospheric temperature, the time of day, acquired or inherited peculiarities. In the adult male the standard is set at seventy-two; in the adult female at seventy-six to eighty. And yet it is by no means rare for a person of apparently good health to have a pulse anywhere in the sixties. By general consent however a pulse below sixty is to be regarded as infrequent.

The *pulsus infrequens* may occur at almost any period of life. Prentiss<sup>4</sup> has reported one instance at sixteen months. It was caused by an injury to the neck, followed by an abscess between the medulla and pons.

Grob, from elaborate study, says it may occur as late as ninety, usually however between twenty and forty. In my experience it is more often seen in the middle period of life, or after it.

The infrequent pulse in adults (where the rate falls below 40) is rare, though most practitioners with large experience have probably seen occasional instances at some time or other in their practice. If, however, we should adopt sixty as the figure below which all pulses are to be reckoned as infrequent, we would find them comparatively common. According to Grob's experience about one individual in forty<sup>5</sup> has an infrequent pulse. Thus far it has been unfortunate, however, that most observers have failed to note the relation in number per minute between the pulse and heart beats, though the importance of ascertaining this variation was pointed out by Stokes<sup>6</sup> in 1846, when he told of a patient whose heart beats were thirty-six to the minute while the pulse was twenty-eight. Since that date the importance of this point has been emphasized sufficiently to have merited general attention.

Four different relations may be observed between the action of the pulse and the heart: (1). The heart and pulse may beat simultaneously. (2). The heart beats may not all be communicated to the wrist. (3). The auricles may pulsate more frequently than the ventricles and arteries. (4). Contractions of the several chambers may occur, when the heart has been removed from the body; and even when the muscular tissue of the walls of the heart has been cut into small pieces, they may be made to contract by various stimuli,—a fact that has been known since the time of Vesalius.

The first two of these statements have been satisfactorily proved by clinical experience; the last two by physiological experimentation, where electrical currents and other stimuli have been known to produce muscular contractions hours after death.

The infrequent pulse has two principal varieties, the physiological and the pathological.

Of the first we have two well known instances, the infrequent pulse of inheritance, and the pulse of pregnancy.

Prentiss has recorded several instances where persons whose pulses averaged thirty to thirty-two were in apparently sound health, and historians tell us not only that Napoleon's pulse was forty even in the midst of a battle but that he felt uncomfortable when it rose to sixty. The most remarkable instance however is, I think, that of Vigouroux<sup>7</sup> who had under his observation a laborer, whose pulse never exceeded twenty. The man never experienced any illness so far as he knew, except on one occasion when he had a short and slight gastric attack, that was successfully treated. In this connection it is interesting to remember that Czermak<sup>8</sup> could stop the action of his heart for a few beats by pressure on the pneumogastric and Quincke<sup>9</sup> has verified this experiment. Besides, the heart has been stopped by stopping the respiration.

The infrequent pulse is more common in males than in females, the ratio being about five to one according to Prentiss's tables.

Of the pathological we have two subdivisions, the Paroxysmal or Periodic or Temporary, and the Chronic or Essential. Under the causes of the former come the infections, typhoid, diphtheria, pneumonia, erysipelas, puerperal affections and influenza, best seen during convalescence, in toxæmias from lead, tobacco, tea, coffee, digitalis, uræmia, cholesteræmia and syphilis, in functional nervous disturbances, reflex influences from the skin or gastro-intestinal tract, and in temporary debility.

Under the pathological variety are organic diseases of the brain or cord. According to Prentiss the infrequent pulse is chiefly due to organic disease of the brain or cord, epilepsy and organic heart affections, though in eighty-nine of his cases the cause was stated to be unknown in thirty-five.

Grob in his etiology, based on personal observations, is quite definite on this point. In a series of 100 cases he has put the etiological factors as follows, as to relative frequency:

Physiological .....	6
Idiopathic .....	1
Articular Rheumatism.....	24
Circulatory Disturbances.....	1
Digestive Disturbances.....	10
Diseases of the Central Nervous System.....	6
Infections and Constitutional Diseases.....	9
Convalescence from typhoid especially, but also diphtheria, measles, pneumonia, and erysipelas.....	43

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 100

The paroxysmally infrequent pulse according to Grob represented 112 out of 140 of his cases. His experience that the paroxysmally infrequent pulse largely predominates coincides with my own views. The pulse rate in these instances under pathological conditions is subject to wide variations in range while, as we have seen, under physiological conditions, it maintains a tolerably steady rate. In the first named condition, very low rates have been recorded. Holbertson has published one instance where the pulse fell on one occasion to seven and one-half in a patient who had attacks of vertigo and loss of consciousness following an accident on the hunting field. At the post mortem examination it was found that there had been pressure on the medulla and upper part of the cord, the result of fracture of the occipital bone and upper cervical vertebræ. Bony union of the parts had ensued but with displacement of the fragments. Other instances have been published where the pulse fell as low as to four<sup>10</sup> and even three.<sup>11</sup> This last case was one of the paroxysmal variety, and the patient rallied from the attack.

The explanation of the infrequent pulse is not simple. We can realize that pressure on the pneumogastric may cause it, as in Czermak's and Quincke's experience, and there are many where there was organic disease at the base of the brain from pressure by bone, as in Holbertson's case.<sup>12</sup> This nerve passes from its root in the medulla down to the cardiac plexus. The augmentor (accelerator) fibres of the sympathetic also pass down from near the same spot to the cardiac plexus, supplying energy to the muscular tissue of the heart, though the precise course of the fibres is unknown. Possibly they pass down through the cord.

The pneumogastric regulates, *i. e.*, moderates or restrains the energy of the heart, thereby slowing up the pulse.



The use of the intrinsic ganglia in the heart substance is not yet understood. They may supply motor energy to the heart, independent of the spinal nerves or the sympathetic. And yet they appear to lose vitality after separation from the peripheral nerve system. Certainly the heart beats in the foetus before any trace of nerve fibres can be found. Lastly it appears, that the muscle tissue of the heart may assume the initiative, acting independently of any nervous influence, and recent experiments appear to prove it. The paroxysmal cases may be due to reflex excitations of the pneumogastric, though the stimulus of almost any afferent (sympathetic) nerve, (such for example as the abdominal sympathetic), may cause them. For a blow on the abdomen conveys the impulse to the medulla through the pneumogastric, slowing or stopping cardiac action. These attacks may also be due to depression of the augmentors, such as occur in nervous or muscular strain, and in gastro-intestinal irritation. They may also be caused by diminished action of the accelerators. In the permanently infrequent pulse we appear to have these causes in continuous action.

There may or may not be symptoms. In the physiologically infrequent pulse, such as the hereditary, or congenital, or pulse of pregnancy, there are no untoward symptoms. In fact, evidence goes to show that in most of them, or certainly in many, an increase in rate begets disagreeable sensations.

On the other hand, the infrequent pulses of the infections, such as typhoid and the toxæmias, poisoning by tobacco, digitalis, tea or coffee, uræmia and anæmia, cholesteræmia and syphilis, are so wrapped up in the symptomatology of their several affections that a description of their several symptoms would carry us beyond the scope of this short paper.

We have now to consider the remaining forms of the neuroses (the so-called idiopathic varieties), a definition which, from a theoretical point of view, fits them conveniently enough, because they may turn out to be due to reflex excitations, as from gastro-intestinal disturbances, or skin diseases, or to direct excitations as after severe muscular exercises or nervous strain. In these latter cases the symptoms are those of general lassitude, prostration, præcordial oppression, the sense of constriction, choking and dyspnœa, and are apt to be associated with nervous strain.

On the other hand, the results of severe muscular exercise are

apt to be reflected on the nervous system by attacks of vertigo, convulsions, unconsciousness, of short or long duration, epileptiform or apoplectiform seizures, loss of rhythm, a systole associated with varying rates of infrequency of pulse, Cheyne-Stokes respiration and a synchronous pulsation of auricles and ventricles, which come on without warning or with an ill-defined aura.<sup>13</sup> This latter variety has now been erected into a group under the name of the Stokes-Adams syndrome,<sup>14</sup> because these two men were the first to describe it. Cases of this variety may survive for several years.

I saw such a case many times in consultation in 1901 (Case 1). An old gentleman with arterio-sclerosis, during a prolonged attack of heart failure, with a pulse in the thirties, while the heart beats were not far from normal, developed orthopnoea and ascites and had Cheyne-Stokes respiration during a period of unconsciousness that lasted over a week. But recovery took place and now, after the lapse of about two years, his physician reports that he is in fairly good health, driving in the park in good weather, and going to the theater when he feels inclined to do so. Digitalis was used in small doses for the ascites for brief periods only, the treatment otherwise being symptomatic.

On the other hand, there is a group that seem to be dependent on gastro-intestinal irritation, and its signs are flatulence, acid dyspepsia, nausea and vomiting.

The diagnosis offers no difficulties, but we should never in these cases rest satisfied until we have examined the heart to find whether it beats synchronously with the pulse. The simultaneous use of the sphygmograph and cardiograph may be instructive in these instances. And we should carefully run over the etiological causes, finding out first whether it is physiological or pathological, and if the latter, whether it is not merely one of the symptoms of the several diseases that have been enumerated. Of the prognosis but little can be said because the details are very scanty. In the physiological variety it is favorable so far as we know, but the instances are few, and the expectation of life has not yet been worked out.

In the paroxysmal forms, the prognosis depends on our success in mastering the disease, of which it is a symptom, and each affection gives a different expectation. For example, the infrequent pulse of digitalis or tobacco ceases when these herbs are withdrawn; in the infections it ceases with established convalescence;

but in chronic diseases like lithæmia, uræmia, syphilis, a good outlook can only be assured when these diseases are held under firm control. Now if the physiological variety together with the paroxysmal represent, as according to Grob they appear to, more than eighty per cent. of the cases, the prognosis is on the whole favorable.

On the other hand the permanently pathological form has a less favorable prognosis.

In the treatment no greater mistake can be committed than in aiming to accelerate the pulse by medication simply. Experience has abundantly shown that such treatment has invariably bad results. The physiological cases require no special treatment, and even the pathological appear to do best when let alone so far as the frequency of the pulse is concerned.

Especially when the infrequent pulse is associated with a recognized affection or condition like typhoid or lithæmia or syphilis, gastro-intestinal irritation or skin disease and anæmia, the treatment apposite for the underlying affection will affect the pulse favorably, and no special medication of the infrequency is necessary. Even alcoholic or diffusible stimulants should be used with caution. The nitrites and bromides are safer but it is always better, so far as possible, to treat the underlying disease without special reference to the infrequency of the pulse.

When, however, we are inclined to suspect that the infrequent pulse is due to a functional nervous disturbance, or are in doubt as to its exact cause, sedatives like the monobromate of camphor, assafoetida, valerian and Hoffman's ether are the remedies par excellence, together with carbonated baths and resistance exercises, carefully regulated diet, and observance of the sound rules of health.

The following cases taken from my pathological records and private practice illustrate the graver forms of the infrequent pulse.

*Case II. Temporarily infrequent pulse due to digitalis.*

C.; age forty-four years. For five years had suffered from rheumatism, and for eighteen months from dyspnoea and palpitation. One week before admission to hospital his feet began to swell, and on admission he was found to be othopnoëic. Urine contained twenty per cent. of albumen by bulk. After treatment by digitalis, in half ounce doses of the infusion, his pulse fell one day to thirty-six, when the digitalis was stopped. On the next it had risen to thirty-eight, and three days later to forty-five to fifty-four. Compressed air was then given and pulse reached eighty-four. Digitalis was given subsequently, but, the pulse having fallen to fifty-two,

it was stopped. About two and a half months later the patient died from rupture of the chordæ tendineæ of the mitral valve (it was thought). The aorta contained extensive atheromatous plates. The heart weighed thirty-two ounces. The infrequent pulse was ascribed to digitalis.

*Case III. Temporarily infrequent pulse; mitral stenosis; chronic nephritis; ascites, treated by digitalis.*

J.; age thirty-seven years. Three years before admission to hospital he began to have palpitation, dyspnœa and præcordial pain, and three months previously œdema of the feet, the urine being reduced to twenty ounces.

On examination no radial pulse was found. Extreme dyspnœa. Cough and expectoration. Murmur in mitral area. Under the infusion of digitalis in half ounce doses improvement ensued, but after two weeks use of it the pulse began to be infrequent and the general condition worse. After the digitalis was stopped the patient's condition improved and with it the pulse, but, becoming irregular again, it was resumed, carbonate of ammonia and spiritus frumenti being added to each dose. The improvement in the pulse was only temporary, for one month after admission it had fallen to forty. During the summer the patient was absent from the hospital, reurning in the autumn with no radial pulse, irregular cardiac action. and urine reduced to twelve ounces per day.

From this second attack the patient did not rally. At the post-mortem examination the heart was found to be fatty, hypertrophied and dilated, weighing twenty-two ounces. The mitral had a button-hole opening. There was also chronic nephritis.

*Case IV. \*Temporarily infrequent pulse; mitral disease; chronic nephritis; abdominal dropsy.*

A lady from Louisville, Ky., came under my care in the Post-Graduate Hospital recently with pulse 64, temperature 98, respiration 24. She had been under pretty constant medication by digitalis and opiates. During her stay in the hospital there were temporary suppression and subsequently lobar pneumonia. On four occasions she had attacks of heart failure, the pulse registering once twenty-eight, and three times forty-four. She recovered under the use of nitrites and alcoholics with occasional use of digitalis for diuretic effects only. On her return to the South the pulse had risen to seventy-six.

*Case V. Mitral stenosis; phthisis; infrequent pulse.*

In still another case of mitral disease seen in consultation, where the patient had suffered from hæmoptysis and had suppression and albuminuria, the radial pulse ranged from thirty-seven to forty-four and was intermittent and irregular. Though I have learned that both cases III and IV are now dead, I am not aware that any post-mortem examinations were made.

The following cases illustrate lesser degrees of infrequency, when the rate falls below the standard, viz., sixty:

\* Previously reported by the author.



*Case VI. Infrequent pulse in general tuberculosis and tubercular meningitis.*

S.; age nineteen years; stable boy. Six months before admission to hospital he had caught cold, as he expressed it, and since that time had lost twenty-five pounds. He complained of pain in head and a stiff neck. Pulse 42, temperature 100, respiration 20. Dry tongue, scowling brow, abdomen retracted. Albuminuria. After five months stay in hospital patient suddenly became delirious. Pulse weak, 52. A month later, with temperature 99.5 and respiration 24, the pulse had risen to 64. But after another month it had fallen to 52. About a year later the temperature became subnormal (97.5), respiration 24, pulse 60. At the post-mortem examination tubercular pericarditis was found. In the lungs, liver and kidneys and at base of brain miliary tubercles. Cerebral ventricles distended with serum.

*Case VII. Melancholia; temporarily infrequent pulse.*

Z., a young man listless and feeble, complaining of pain about the head, spine and chest, with a previous history of glycosuria, unable to apply himself to any intellectual work, was under my care in 1898-'99. Lateral curvature with protrusion of right scapula. Misshapen head, marked difference between the lateral halves. Left exophthalmos. Pulse sixty to sixty-four. Under treatment by carbonated baths and exercises, the pain in the back disappeared, the pulse became more frequent so that from an average of sixty it reached seventy-two. After leaving my care for the summer the patient relapsed into his former condition, but after a second course of treatment the pain in the head disappeared and the pulse again improved. The infrequent pulse was attributed to his neurotic condition, the symptoms being those of chronic basilar meningitis.

*Case VIII. Mitral stenosis; periodically infrequent pulse.*

I have under my care now a patient who came to me in August, 1899, suffering from præcordial oppression, dyspnœa and a dilated heart, with feeble impulse, weak and irregular action, rate fifty-two. Presystolic murmurs over the mitral area, not conveyed. Occasional thrill. After treatment by carbonated baths and resistance exercises with strychnine, his pulse rose to the normal. His heart has now nearly regained its normal dimensions; there is absence of præcordial pain and dyspnœa; and the patient is leading an active life as the member of a very prominent firm in this city. His pulse rate is sixty to sixty-four.

*Case IX. Infrequent pulse in uræmia in association with diabetes and mitral disease; temporarily infrequent pulse.*

A lady of middle age, the wife of one of our most distinguished practitioners, was placed under my care some years ago. As a child she had suffered from inflammatory rheumatism, and later from sciatica, getting relief from atropia and morphia. When first seen she had albuminuria; sugar in large amount, and some suppression. Vertigo, pain alternating between the occiput and vertex, dyspnœa. Pulse fifty-six, intermittent. Heart's sounds almost inaudible, but on moving rapidly about in her room a slight murmur conveyed to the left was detected.

The uræmia, and with it the infrequent pulse, was in this instance promptly overcome by the use of the muriate of pilocarpia, combined with alcoholics. According to my experience this drug may be given in divided doses up to as much as one and one-half grains per day, if guarded by alcoholics and watched by a competent nurse.

In the following case the infrequent pulse has a chronic character:

*Case X. Arterio-sclerosis; apoplectiform attacks; lithæmia; infrequent pulse, at first periodic and later chronic.*

A patient in middle life came under my observation in consultation many times in April of 1901. In the preceding month he had an apoplectiform attack followed by stiffness in his knees and hips, and a sense of general lassitude. The usual local applications were made and in addition he took twenty grains of aspirin four times a day and in a few days was relieved of his pains; but muscular inability of the left masseter remaining, he took salophen in twenty-grain doses every three hours, but was obliged to return to aspirin for relief of his pain. At this time the pulse had fallen to fifty. When I first saw him he was taking morphia in small quantities, as he had taken it previously for rheumatic attacks. I immediately stopped the latter, putting him on one-fortieth grain doses of sulphate of strychnia together with half-ounce doses of whiskey every four hours, and a liquid diet. Pulse was forty, but full and regular, synchronous with the heart. Respiration twenty-two to twenty-four. Under this treatment the pulse had risen, on May 5th, to sixty. Digestive disturbances causing intermittence of the pulse, strychnia was diminished and caffeine in one-grain doses with assafoetida three grains were substituted, while occasional doses of nitro-glycerine, one one-hundredth of a grain, were added. Under this treatment the pulse continued to rise so that on May 6th it was sixty-eight. But being deficient in force, digitaline (Merck) was given on one occasion four times during the day, nitro-glycerine being substituted for it in doses of one one-hundredth of a grain every fifteen minutes, whenever necessary. During all this time about two and one-half ounces of whiskey were being given daily and after this nitro-glycerine and strychnia as required with whiskey at intervals of about three hours. On May 10th, without obvious reason, the pulse had again fallen to forty-one to forty-two, but, as it had force and regularity, no effort was made to increase its frequency. For about five days it remained at forty, being strong and regular. Later arsenious acid in one one-hundredth grain doses and cactus in the fluid extract form in one minim doses were given, the pulse gradually rising under them to sixty. On May 17th it had reached seventy. The sulphate of quinine in eight-grain doses and morphia in one-eighth grain doses for relief of the pain replaced the arsenic, but the cactus was given with interruption, and with no other remedy for a week, when strychnia was again given. The pulse then returned to its normal frequency and continued there, although on a single occasion it fell to fifty-two. On June 26th the patient was suddenly attacked with pain in his left arm and wrist, which became swollen, the pain recurring every morning for five to six days. The pulse fell to forty-five. On the morning of July 5th the patient was awakened with buzzing in his ears,

great dizziness; no pulse at the wrist. Aromatic spirits of ammonia, an ounce of whiskey and a dose of nitro-glycerine, one one-hundredth grain, were now taken and relief was obtained in about half an hour. This attack, however, was so prostrating that the patient was confined to his bed with it until September 6th, the pulse ranging from thirty-five to forty-four. The treatment during this time was by strychnia one thirtieth grain, nitro-glycerine one hundredth, and whiskey one half ounce, taken every three hours. The suprarenal extract in three-grain doses was given for a week, but did not sustain the pulse and was therefore abandoned. Some improvement in the pulse, however, was always noted after the use of the static battery. It would rise to about fifty on these occasions. On the 23rd of November the pulse reached sixty, when all remedies except whiskey were suspended. During the last year the pulse has averaged between forty-eight and fifty-four, the remedies used being strychnia, nitro-glycerine, and suprarenal extract, increased to five grains, three times a day. During the present month I have examined him with the following results: Pulse thirty-six to forty-four, of fair force and regular. Heart beats synchronous with the pulse. No enlargement of the heart. No displacement of the apex; no murmurs, but impulse lacking. No thrill. Accentuation of the second sound at apex. No palpitation. Liver a little enlarged; some chronic bronchitis. Physical condition fairly good; takes no remedies; eats well, sleeps well and walks from one to two miles a day without fatigue or embarrassment of respiration, but he has the facies arterio-sclerotica.

This interesting case has now entered upon the chronic stage. By some it would be called an instance of permanent bradycardia. I should prefer to call it the chronic form of the infrequent pulse.\*

Attention is called in conclusion to the following points:

(1.) The importance as bearing on prognosis and treatment of determining whether the infrequent pulse is physiological or pathological;

(2.) And whether this pulse is merely intermittent or deficient;

(3.) The association of this condition (as shown in the cases cited) with mitral disease, (stenosis especially) arterio-sclerosis, brain disorders, diabetes, chronic nephritis and poisoning by digitalis;

(4.) The danger of giving digitalis in large doses and the fact that milder cardiac remedies to the almost total exclusion of digitalis or its congeners may alone or in conjunction with hydrotherapy, resistance exercises, massage, electricity and compressed air be effectual remedies;

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\*. This history has for the most part been prepared for me by the patient himself.

(5.) The inadequacy of our knowledge as to the causation of the infrequent pulse; and finally,

(6.) The inadvisability, if not impropriety, of using the terms of Greek derivation ending in *cardia* as synonyms of this condition.

1. Introduced by GROB. *Deutsch. Archiv für klinische Medicin*, 1888, xlii, p. 574.
2. KARDIOS, heart; brados, slow; spanos, deficient; araios, rare; obligos, few.
3. MACKENZIE. *Study of the Pulse*, Edinburgh and London, 1902.
4. PRENTISS. *Transactions of American Physicians*, 1889, p. 120.
5. GROB. 82 in 3578 patients.
6. STOKES. *On the Heart, etc.*, 1855, p. 329.
7. VIGOUROUX. *Gazette des Hopitaux*, 1876, p. 788.
8. CZERMAK. *Viertel Jahresch. für pract. Heilkunde*, 1868, p. 190.
9. QUINCKE. *Berliner klinische Wochenschrift*, 1875, No. 15, p. 190.
10. W. HENRY DAY. *British Medical Journal*, 1880, vol. I., p. 113. The pulse beat four times a minute for about four minutes during an attack of unconsciousness.
11. PRENTISS. In case seventy-nine.
12. HOLBERSTON. *Medico-Chirurgical Transactions*, Vol. XXIV, p. 76.
13. HIS, JR. *Deutsch. Archiv für klinische Medicin*. Vol. 64, p. 31<sup>c</sup>.
14. HUCHARD. *Mal du Coeur*, Paris, 1893, p. 309.

## Editorial

**SURGEON.** *n. s.* [corrupted by conversation from *Chirurgion*.] One who cures by manual operation; one whose duty is to act in external maladies by the direction of the physician.

SAMUEL JOHNSON.

*A Dictionary of the English Language.*

**COUGH.** *n. s.* [*Kuch*, Dut.] A convulsion of the lungs, vellicated by some sharp serosity. It is pronounced *coff*.

SAMUEL JOHNSON.

*A Dictionary of the English Language.*

### Arterio- Sclerosis

The papers on arterio-sclerosis, which are published in this issue of the *ANNALS*, bring collectively into prominence the important facts of this pathological process in its relations with various diseases. In 1872, as a result of studies upon the pathology of nephritis, Gull and Sutton announced their belief that the changes in other organs so often found in connection with renal disease were due to accompanying fibrosis of the smaller arteries and capillaries, which was primary, and by which the kidneys were secondarily affected. To this condition they applied the term arterio-capillary fibrosis. This suggestion led to a multitude of observations upon the effects of arterial disease upon the organs and tissues, and gave a reasonable explanation of many obscure conditions. The tendency to accept sclerosis of the arteries as an etiological factor in a great number of ailments has led to some scepticism, and there is now a reaction against



the assumption of this degenerative process as the basis of almost any chronic disease. As arterial degeneration is practically a physiological process in old age, and does not necessarily produce local disease, or even shorten life, proper caution seems warranted. As Dr. Browning very pertinently remarks, it is certainly time for conservative judgment. It cannot be denied, however, that this condition is met with great frequency after middle life, and is often responsible, at any rate indirectly, for a great many deaths.

This subject was very appropriately selected for a symposium for the last meeting of the Medical Society of the State of New York, whose members are, for the most part, general practitioners. In spite of the prevalence of arterio-sclerosis, and its recognizable symptoms, it is to be regretted that its presence escapes detection until an advanced stage renders its amelioration hopeless. The increased tension of the pulse and accentuated aortic second-sound, are symptoms which should be found whenever present during the routine examination of a patient. When loss of body weight, grayness of the hair, wrinkling of the skin, mental inactivity, and other indications of premature senility are added, the clinical picture is pronounced. As for the symptoms arising from involvement of the different viscera, we can do no better than refer our readers to the series of excellent papers.

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### In Memoriam

STEPHEN C. JOHNSON, M. D.

Dr. Stephen C. Johnson died at his home in Luzerne, Warren county, N. Y., January 27, 1903, after an illness lasting three weeks. He died from la grippe, complicated with cystitis. Dr. Johnson was born in Guilderland, N. Y., on the eighteenth day of October, 1825. He graduated in medicine from the Albany Medical College, January 23, 1849. He was a successful practitioner and was active up to the time of his last sickness. The funeral services were from the house January 29, 1903, the Reverend Weston, of Luzerne, officiating. The interment was at Altamont, N. Y.

DAVID FLETCHER VAN AKEN, M. D.

Dr. David Fletcher Van Aken was born in the town of Knox, Albany county, N. Y., September 28, 1833. His preparatory education was received at Carlisle Seminary, Richmondville Academy, and at Poultney, Vt., Academy. After some time

spent in teaching in the district schools of Albany county, he began the study of medicine in the office of Dr. M. M. Lamb, of New Salem. He graduated from the Albany Medical College in 1860, and began practice at Lisha's Kill, N. Y., where he married Abbie Lansing, daughter of Henry O. Lansing. He was after this located at Stuyvesant, N. Y., Lee Centre, Oneida county, N. Y., and since 1871 at Malden, Ulster county, N. Y., where he died January 30, 1903.

Besides his wife, he is survived by three sons, DeBaun, of Amsterdam, Edward L., of Croton Landing, and David R., of Malden. Funeral services were held at his late residence February 2. Interment was at Saugerties.

Dr. Van Aken was a kind and devoted husband and father, an earnest Christian, a faithful physician, and has left a large circle of friends who, while they mourn his departure, join his family in being thankful for the ministry of his life, and the fine example of hope and fortitude he set during his last illness.

#### JEROME B. HOLCOMB, M. D.

Dr. Jerome B. Holcomb, who graduated from the Albany Medical College with the Class of 1855, a practitioner at Newport, Herkimer county, N. Y., died recently.

#### JAMES I. SCOLLARD, M. D.

Dr. James I. Scollard, of the class of 1874, of the Albany Medical College, died at Clinton, N. Y., February 20, 1903.

#### F. E. MARTINDALE, M. D.

Dr. F. E. Martindale, of the class of 1853, of the Albany Medical College, residing at Port Richmond, N. Y., died recently.

## Public Health

### ABSTRACT OF VITAL STATISTICS, JANUARY, 1903

#### *Deaths.*

	1901	1902	1903
Consumption .....	21	19	33
Typhoid Fever .....	2	3	0
Scarlet Fever .....	2	0	2
Diphtheria and Croup.....	7	3	0
Whooping-cough .....	0	0	4
Cancer .....	8	7	8

	1901	1902	1903
Pneumonia .....	19	9	10
Broncho-pneumonia .....	7	3	6
Apoplexy .....	17	12	5
Bright's Disease .....	16	14	12
Accidents and Violence .....	5	6	2
One year and under.....	9	10	21
Seventy years and over.....	41	31	29

*Deaths in Institutions.*

Albany City Hospital.....	9	8	8
Albany Orphan Asylum .....	1	1	1
County House .....	2	4	6
Homeopathic Hospital .....	4	5	0
Little Sisters of the Poor.....	1	1	2
Penitentiary .....	1	1	0
Public Places .....	2	2	1
Sacred Heart Convent .....	0	2	1
St. Margaret's House .....	2	0	2
St. Peter's Hospital .....	3	4	4

The total number of deaths for January, 1901, 188; for January, 1902, 141; for January, 1903, 153. The death rate for January, 1901, 22.14; for January, 1902, 15.95; for January, 1903, 17.32. Death rate, less non-residents, this year, 16.51.

Marriages.....	38	Births.....	110
		At term .....	97
		Premature .....	6
		Still Births .....	7

The increase in the death rate was almost entirely due to the increase in deaths from consumption and in children under one year, otherwise the health of the city is excellent and compares favorably with the death rate of other cities of the same class. It is hard to explain the increase in the deaths from consumption, as consumption is a communicable disease and the public have been informed now for some three or four years as to the means of preventing the healthy members of the community from contamination. It is probable that the disease will not be diminished or eradicated by dependence upon the public, but the Health Department must, at some time, undertake a vigorous campaign against it. When the propitious moment will arrive for this movement is a question. The position of the Department of Health must have behind it official professional co-operation and public approval. The introduction of quarantine for consumption, of course, would produce some hardship to the individual, but it is a question whether the public interests would not warrant the taking of such radical action. It is doubtful whether the disease will ever be limited without vigorous action.

## BUREAU OF HEALTH PHYSICIANS

Total number of assignments made during the month.....	105
Total number of calls made.....	314

## INSPECTIONS

During the month 48 markets were inspected, 6 commission houses, 4 meat peddlers' wagons, 2 fish peddlers' wagons, 3 fish markets and 40 milk peddlers. Eighteen inspections were made of the Public Market. Three hundred forty-six pounds of poultry were condemned and destroyed. Twenty-four samples of milk were tested with the Babcock test and 7 were found to be at and above the standard of  $3\frac{1}{2}$  per cent. butter fat.

Thirty-four inspections were made of nuisances complained of, of which 3 were of privy vaults, 7 of closets, 3 of drains, 10 of plumbing, 3 of water and 3 of filthy premises. Eight complaints were found to be without cause and 18 notices were served to abated nuisances. Twelve nuisances were found to be abated on re-inspection and 2 were referred to the Commissioner of Public Safety.

In the plumbing department 224 inspections were made, of which 131 were of old buildings and 93 of new buildings. Thirty-three iron drains were inspected, 17 connections street sewers, 24 tile drains, 30 cesspools, 45 wash basins, 45 sinks, 37 bath tubs, 31 wash trays, 65 tank closets. Fifty-seven permits were issued, of which 50 were for plumbing and 7 for building purposes. Nine plans were submitted, of which 1 was for old building and 8 for new buildings. Twelve houses were tested on complaint, 6 by the blue, or red test, and 6 by the peppermint test. Thirty-one houses were examined on complaint, and 15 re-examinations were made.

Since the last report, the Department has undertaken the Babcock test for estimating the amount of fat in milk. Up to this time 24 samples from 14 different milkmen had been tested. Of these 7 were found to be furnishing a milk of the standard quality so far as butter fat is concerned. The standard at present is considered to be three and one-half per cent. of butter fat. The remaining cases showed the presence of fat below this standard, but only one decidedly below. This one case was reported to the State Department of Agriculture for action, but up to this time no report has been made as to the result of their investigation. For obvious reasons the names of the milkmen are not given at this time.

## CONTAGIOUS DISEASES

	1901	1902	1903
Typhoid Fever reported.....	25	9	8
Scarlet Fever reported.....	15	5	9
Diphtheria and Croup reported.....	58	46	14
Chicken-pox reported .....	41	5	12
Measles reported .....	21	12	10
Consumption reported .....	1	0	1



Number of days quarantined for diphtheria and croup:

Longest..... 40      Shortest..... 4      Average..... 17

Number of days quarantined for scarlet fever:

Longest..... 4      Shortest..... 12      Average..... 30

Number of fumigations:

Houses..... 27      Rooms..... 62

#### ANTITOXIN

Cases of diphtheria reported..... 14

Cases in which antitoxin was used..... 10

Cases in which antitoxin was not used..... 4

#### BENDER LABORATORY REPORT

Cultures for diphtheria:

Initial positive	Initial negative	Release positive	Release negative
13	52	8	9

Failed..... 1

Total..... 83

A marked diminution in the number of cases of diphtheria and croup is to be noticed. It is gratifying to note that there have been no deaths from either typhoid fever or diphtheria this month. Whooping-cough shows an increasing mortality. While grippé cases are not required to be reported, a considerable number are known to exist in the city and this disease is again appearing as a factor in the death rate.

#### VACCINATION CREED

The Department of Health of the city of Chicago after years of experience with smallpox and vaccination, declares: *First*, that true vaccination—repeated until it no longer “takes”—*always* prevents smallpox. Nothing else does.

*Second*, that true vaccination—that is, vaccination properly done on a *clean* arm with *pure* lymph and kept perfectly *clean* and *unbroken* afterwards—never did and *never will* make a serious sore.

*Third*, that such a vaccination leaves a characteristic scar, unlike that from any other cause, which is recognizable during life and is the *only* conclusive evidence of a successful vaccination.

*Fourth*, that no untoward results ever follow such vaccination; on the other hand thousands of lives are annually sacrificed through the neglect to vaccinate—a neglect begotten of *lack of knowledge*.

Not one of the 727 cases of smallpox discovered in Chicago within the last four years was found vaccinated as defined in the Vaccination Creed.

Of the total number, 662 never had been vaccinated at all, though most of them claimed that they had. Examination of the arms proved that these attempts at vaccination were failures; there was no scar and the patients finally admitted that the vaccinations when performed did not “take.” A “failure” is not a vaccination; therefore, these 662 cases had never been vaccinated.

Of the remaining 65 cases, 56 had old, irregular and doubtful scars said to be the result of vaccination; but these were not characteristic; they were more like the scars from infected sores or wounds than those from vaccine. Only nine had typical (characteristic) scars; but these also were the results of vaccination made many years before and never repeated.


In no single case of the 727 had the terms of the first article of the Vaccination Creed been complied with—vaccination had *not* been repeated until it would no longer “take.” If it had been they could not have contracted smallpox.

These 727 persons are examples of thousands of others who honestly believe they have been vaccinated, because they have had their arms scratched, something rubbed in and a more or less painful sore has resulted. There is no operation so simple and so safe as vaccination when properly performed and cared for. There is no simple operation in which such serious results follow carelessness and ignorance—even unto death itself, either as a direct result through the needless infecting of the vaccination sore or from smallpox through failure to secure a successful protective vaccination.

It is to be understood that the vaccination herein referred to is that indicated in the second article of the Vaccination Creed, to wit: that made “on a clean arm with pure lymph and kept perfectly clean and unbroken afterwards.”

Each one of these points is essential to a protective vaccination and to freedom from serious soreness: The utmost attainable cleanliness; absolute purity of the vaccine lymph; an unbroken surface, by which latter all danger of contamination from external sources—the atmosphere, clothing, soiled hands, etc., is prevented.

To be more specific on these points: The arm should be first thoroughly washed with soap and water and the site of the operation then wiped with alcohol. After the vaccination is made wait a few minutes and then pin a clean soft handkerchief or a piece of clean soft muslin to the shoulder-seam of the undershirt so as to hang loose over the spot and prevent the sleeve from rubbing it. This must be changed for a clean one every day until the scab comes off and the surface is healed. The vesicle and resulting scab must not be broken or injured in any way and the arm and its coverings must be kept scrupulously clean from the time of the vaccination until it is well.

The vaccination practice of the Department consists in exposing the true skin only by removing the false or “scarf” skin with a dull sterilized needle, and so carefully as not to draw blood. The area so exposed should not exceed one-eighth of an inch in diameter—this size:  and only one place is necessary.

Because experience has shown that cleanliness and the protection of the surface are best secured by the above method, the Department advises against the use of “shields,” bandages, plasters or other dressings; but if these are used—as they are by many physicians—they should only be applied as directed by the physician himself, and with the utmost regard to cleanliness.

It must be repeated that the greatest care should be taken to prevent any breaking of the surface from the time when the scarified spot has dried until the scab drops off naturally. The unbroken surface is Nature's own "shield" against the abscess of disease germs. Do not scratch or rub, and do not handle the arm or change the handkerchief (or other dressing, if any) with dirty hands.

After a vaccination is made with pure lymph on a clean arm, the important points are to secure and maintain thorough cleanliness of the site of vaccination and to prevent any injury of the surface or breaking of the vesicle. There can be no infection of any kind or severe inflammatory action if these precautions are observed.

The vaccination thus indicated will—if the person be susceptible to smallpox at the time—usually "take" and always leave the characteristic or typical scar which, as stated in the third article of the Vaccination Creed, is the permanent and only conclusive evidence of a successful and thoroughly protective vaccination.

It should be clearly understood that no one is insusceptible to vaccinia or vaccination any more than to smallpox. One successful vaccination can be secured in every person; *to this there is no exception.*

With some persons one vaccination may be protective against smallpox for a lifetime; two vaccinations—one in infancy, another when about fifteen years of age—protect most people for life; in comparatively few will vaccination "take" a third time.

The protection of vaccination against smallpox may be positively determined for each individual by repeating the operation from time to time. If the vaccination is still protective, a re-vaccination will not "take." If it does "take," it is proof positive that the person could have contracted smallpox if exposed to its contagion.

The rule is—*repeat vaccination until the susceptibility to vaccine is exhausted.* When this is done it is impossible to contract smallpox. This is the protection given the employes of the Department of Health who handle and nurse smallpox patients and bury the dead from the disease, and in no instance, among the hundreds so employed, has any one of them ever contracted smallpox.

The vaccine lymph used by the Chicago Department of Health is always tested as to its purity and efficacy before it is distributed. The old-time suppurating sore arms, inflamed glands and other evidences of infection never follow the use of this lymph when the operation is performed and cared for in the manner herein advised.

During its seven years of use by competent vaccinators it has been demonstrated to cause no serious amount of discomfort, pain or soreness. Vaccination is thus no longer to be feared, but rather sought for as the only *safe*, positively *harmless* and absolutely *certain* safeguard against a loathsome pestilence.

#### CITY ORDINANCE AS TO VACCINATION

*From the Revised Code, 1897, Article XXXV, p. 236.*

Sec. 1083. [Duty of persons controlling minors.] Every person, being the parent or guardian, or having the care, custody or control of any minor

or other individual, shall (to the extent of any means, power and authority of said parent, guardian or other person, that could properly be used or exerted for such purpose) cause and procure such minor or individual to be so promptly, frequently and effectively vaccinated, that such minor or individual shall not take, or be liable to take the smallpox.

SEC. 1084. [Prerequisite to admission to school.] No principal of any public school, and no principal or teacher of any private, sectarian or other school, shall admit to any such school any child or minor who shall not have been vaccinated within seven years next preceding the admission or application for admission to any such school of such child or minor, nor shall any such principal or teacher retain in or permit to attend any such school any child or minor who shall not have been vaccinated as provided in this article.

SEC. 1085. [Evidence of vaccination.] The evidence of such vaccination to be presented to any such principal or teacher mentioned in the preceding section shall be a certificate signed by the Commissioner of Health or any physician duly licensed by the State Board of Health.

SEC. 1086. [Inspection of schools.] The Commissioner of Health is hereby empowered to visit any and all public and private schools in the city, and to make or cause to be made an examination of the children and minors in attendance therein, as often as he may deem necessary to secure compliance with the provisions hereof.

SEC. 1087. [Penalty.] Any principal of a public school, or principal or teacher of any private or other school, who shall violate any of the provisions of this article, or shall in any way prevent or attempt to prevent the Commissioner of Health from exercising the power conferred on him by this article, shall be fined for each offense not less than five dollars nor more than two hundred dollars.

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## Society Proceedings

### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held in Alumni Hall, on Wednesday evening, February 18, 1903. The meeting was called to order at 8:45 P. M., the President, Dr. Ward, in the chair. The following members were present: Drs. Bingham, Blumer, Carey, Carroll, Curtis, Elting, George, Hacker, Happel, Laird, Lempe, Lomax, MacDonald, MacFarlane, Mosher, Munson, Pease, Richardson, Rooney, Sautter, Sweet, E., Sweet, M. F., Traver, Vander Veer, A., Vander Veer, E. A., Ward; as guests, Drs. Berry, Gorham, Lewi, Smart.

1. *Reading of the minutes of the last meeting.* The minutes were adopted as printed in the ALBANY MEDICAL ANNALS for January, 1903.
2. *Applications for membership.* No names were presented.
3. *Reports and resolutions.* None were offered.



#### 4. *Presentation of papers.*

Dr. WILLIS G. MACDONALD read a paper entitled "Report of Eight Cases of Acute Cholecystitis."

The PRESIDENT declared the exceedingly interesting paper of Dr. Macdonald open for discussion.

Dr. VANDER VEER believed that the introductory remarks of Dr. Macdonald were very appropriate and that the work of the abdominal surgeon was most strenuous, especially in reaching a diagnosis. He felt certain that as we become more familiar with abdominal surgery a correct diagnosis will be more often made. The acute attacks of cholecystitis do present most marked and intense symptoms. He recalled five cases upon which he had operated for an attack of acute cholecystitis. Four of these cases had had previous attacks, ranging over an interval of from two to seven years. He emphasized the importance of the recognition of the existence of peritonitis, which always makes the condition more serious. He believed that some day there would be a volume published upon the surgical diseases of the right side of the abdomen. The report of the cases was so complete that but little further could be said. The ideal operation was cholecystectomy, but in many cases this was not feasible. The acute cases, if too much damage is done about the liver, result in extensive peritonitis and as a rule when once the gall bladder is emptied and drained the essential feature of the operation is performed. He emphasized the importance of properly employed drainage. He recalled two cases which presented certain features not referred to by Dr. Macdonald, one of gangrene and one of abscess of the gall bladder, both of which developed in the second week a condition of delirium which lasted for some time but ultimately ceased and the patients made a good recovery. Within the past six months he had had two cases of gall stone diseases, associated with uterine fibroids. In one of the cases Dr. Vander Veer believed that the presence of the fibroid had had much to do with the development of the acute infection of the gall bladder. He was much interested in the family predisposition to gall stone trouble as illustrated by one of the cases reported by Dr. Macdonald. He had seen similar cases in which there appeared to be an hereditary tendency. Most of the cases of acute abscess of the gall bladder appeared to have only one, two or at least a very few stones. He emphasized the case with which an abscess of the gall bladder is confused with acute appendicitis. He illustrated this by a case in which he opened what he supposed to be an appendicular abscess, from which in about two weeks two typical gall stones were discharged and at a subsequent operation gall bladder disease with several calculi was found.

Dr. MACDONALD in closing the discussion remarked that in one of the cases reported the history distinctly stated that the woman **was** delirious for two weeks after the operation. It was also present in another case. He regarded delirium as essentially cholangitic, which was formerly referred to as Charcot's hepatic fever. He had on several occasions found gall stones when abdominal operations for other conditions had been undertaken. He called attention to the fact that

Dr. Howard Kelly had exploited the idea of combined operations upon the gall bladder and other abdominal conditions. He did not believe that the mere presence of gall stones justified an operation. He called attention to the fact that Brewer had found that about eight per cent. of the cadavers dissected at the College of Physicians and Surgeons in New York presented gall stones. The German statistics also seemed to indicate that about thirteen per cent. of adult individuals have gall stones.

Dr. GEORGE E. GORHAM read a paper entitled "An Improved Extension Apparatus."

The PRESIDENT declared the exceedingly valuable communication of Dr. Gorham open for discussion.

Dr. VANDER VEER remarked that it was a very ingenious appliance and obviated many of the difficulties which are ordinarily encountered in the application of extension. He had always been interested in the point relating to the traction which had been brought out by Dr. Gorham.

Dr. ELTING said that for several months past he had made use of the device designed by Dr. Gorham in the wards of the Child's Hospital and had made an especial attempt to find some bed or some condition to which this apparatus was not readily applicable, but that he was extremely pleased to say that he had as yet discovered no such condition. Every one who has had any experience with the application of extension realizes the great difficulties encountered and also is well aware of the fact that many varieties of extension apparatus really do not extend.

He remarked that in a conversation with Dr. Bradford of Boston sometime since he had enquired particularly as to the latter's sentiments regarding extension and had been told that as yet no satisfactory apparatus of the kind had been devised. Dr. Elting believed that the ingenious device of Dr. Gorham was practically an ideal one and that it obviated all of the difficulties usually encountered in carrying out this sort of treatment.

Dr. WILLIAM H. HAPPEL read a paper entitled "A Report of a Series of Cases."

The PRESIDENT declared Dr. Happel's paper open for discussion.

Dr. BLUMER wished to speak about the thymus case reported by Dr. Happel, because it was a subject in which he was much interested. From the study of several cases which had come to autopsy in Albany it did not appear that pressure upon the trachea was the cause of death. It is possible in some instances that when the head falls back a direct compression of the trachea may result. Examination of the organs of these cases showed very peculiar lesions, not hitherto described in this condition. They resembled the lesions produced by infections, especially diphtheria, and usually involved the lymphatic apparatus in general. They take the form of a marked proliferation of the endothelial cells of the germinal centres, associated with more or less necrosis. He did not believe that the lesions are necessarily a result of bacterial infection. He referred to the experimental work of Flexner, who had demonstrated the action of

certain toxins upon organs and tissues in which lesions resembling those seen in cases of thymus death were produced. The thymus closely resembles the tonsil and the lymphatic apparatus in general. These cases of death may be due to an auto-intoxication by the secretion of the thymus or that this secretion may have predisposed the individual to a general infection. He remarked that he was skeptical about death being due to mechanical pressure and believed that it was rather due to the hyperthymization or to some accessory action of the hyper-secretion of the thymus.

Dr. MACDONALD reported the death of a child five years of age which had resulted during an operation for necrosis of the jaw. Chloroform was used and the operation soon completed, requiring scarcely more than five minutes. The child had not been deeply anesthetized. While packing the wound with gauze it was noticed that the child had stopped breathing and the usual methods of artificial respiration were resorted to, but without avail. This was followed by tracheotomy and the introduction of the Fell-O'Dwyer apparatus. There was absolutely no obstruction to the entrance of air into the lungs and although artificial respiration was continued for two hours the patient never rallied. At autopsy the condition of enlarged thymus and lymphatism was found. He was very skeptical about the possibility of outlining an enlarged thymus by percussion.

Dr. HAPPEL in closing the discussion remarked that while mechanical death rarely resulted from enlarged thymus, one writer had reported a case in which he had found the trachea actually indented. He agreed with Dr. Macdonald that it must be very difficult to outline an enlarged thymus.

It was moved and seconded that, owing to the lateness of the hour, Dr. Laird's paper should be presented at the next meeting. Motion carried.

It was moved and seconded that a vote of thanks be extended to Dr. Gorham for the presentation of his extremely interesting paper and the demonstration of his ingenious invention. Motion carried.

Moved to adjourn, seconded, carried.

ARTHUR W. ELTING, *Secretary*.

SAMUEL B. WARD, *President*.

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## Medical News

Edited by Eugene E. Hinman, M. D.

ALBANY MEDICAL COLLEGE ALUMNI ASSOCIATION OF THE CITY OF NEW YORK.—The growing interest in this flourishing association manifested itself on January 21st, when the eighth annual banquet took place at the Hotel Marlborough. Many new faces, especially among the younger men, were present and all were enthusiastic over the reunion. Good things were provided to eat and drink after which Alma Mater was toasted. Among those gathered around the table were noticed Dr. Arthur G. Root, representing the faculty; Dr. Spalding,

the organizer of the association, Dr. Scofield, the president of the Alumni Association, and Drs. Geoghan, Crothers, Rhein, Alexander, Wood, Quinlan, Baker, Cotter, Holmes, VanWert, Van Dyke, Coburn, Conley, Macfarlane, Packer, Hasbrouck, Gilday, Barnes, Stellingen, Capron, Cordes, F. W., Cordes, A. E., Muir, Kinloch, Keeler, Moak, Livingston, Weaver, Parshall, Gregory, Gartner.

The following officers were elected for the ensuing year: President, Dr. Meyer L. Rhein, '80; vice-president, Dr. Walter C. Gilday, '94; secretary, Dr. Charles Gartner, '95; ass't. secretary, Dr. Augustus E. Cordes, '99; treasurer, Dr. Flavius Packer, '93; governors, Drs. Warren C. Spalding, '81; George J. Holmes, '82; Arthur J. Capron, '94; James J. Alexander, '71.

**PHOTOGRAPHS AND INFORMATION WANTED.**—The collection of photographs has been cared for by the Historian in such a manner that hereafter they will be preserved and will also be readily accessible on any occasion. Filing cases have been provided and placed in the college library, each class being filed by itself. It is the desire of the Historian to make this system as complete and valuable as possible by preserving in this manner all information that can be secured about the graduates of the college. In order that this may be accomplished all graduates are requested to advise their class historian or the historian of the Alumni Association of any facts about their doings that might be of interest to their class-mates. It is also earnestly requested that all graduates prior to 1890 will forward to the Historian, Dr. E. E. Hinman, Albany, N. Y., their photographs for preservation.

**ALBANY HOSPITAL OFFICERS.**—At a recent meeting of the Board of Governors of the Albany Hospital the following officers were elected to serve during the following year: President, James McCredie; vice-president, J. Townsend Lansing; secretary, Gustavus Michaelis; treasurer, Charles R. Knowles; treasurer of endowment fund, Dudley Olcott; executive committee, James McCredie, J. Townsend Lansing, Charles R. Knowles, Dudley Olcott, Albert Vander Veer, M. D.; law committee, Hon. William L. Learned, Albert Hessberg and Robert G. Scherer.

**THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR JANUARY, 1903.**—Number of new cases, 48. Classification of cases: Dispensary patients receiving home care, 1; district cases reported by health physicians, 5; charity cases referred by other physicians, 29; total number of charity cases, 35. Moderate income patients, 13. Old cases still under treatment, 24. Total number of patients under nursing care, 72. Classification of diseases: (new cases) medical, 20; surgical, 6; gynecological, 5; obstetrical, 17. One contagious disease in medical list. Transferred to hospital, 2; died 4.

*Visits of Guild Nurses:* Number of visits with nursing treatment, 628; for professional supervision of convalescents, 250; total for the month, 878. Four graduate nurses and four assistant nurses on duty. Cases were referred to the Guild by the City Physician, by three of the health physicians and by 13 other physicians.



*Special Obstetrical Department:* One completed case in January, Head Obstetrician in charge, two medical students and one Guild nurse in attendance. Number of visits by Obstetrician, 2; medical students, 7; by Guild nurses, 11; total number of visits to one patient, 20.

**BENEFIT CONCERT FOR ALBANY GUILD FOR THE CARE OF THE SICK POOR.**—This worthy charity has always found very hearty co-operation by the people of Albany and we are pleased to announce that the Fourth Annual Concert by the Kneisel String Quartet will be given under the auspices of the Guild at Centennial Hall, Thursday evening, March 5, 1903. Tickets may be had from members of the Guild. Public sale and exchange at Cluett's.

**UNION COLLEGE, BOARD OF GOVERNORS' SEMI-ANNUAL MEETING.**—At the semi-annual meeting of this body Governor Odell was chosen honorary chancellor for 1903, and he will deliver the annual address at the commencement in June. Hon. J. Newton Fiero, dean of the Albany Law School, was elected secretary of the board to fill the vacancy caused by the resignation of Gen. Amasa J. Parker. Reports were made concerning the different departments which showed that all departments are in a very flourishing condition.

**THE HOMŒOPATHIC MEDICAL SOCIETY OF THE STATE OF NEW YORK.**—The annual meeting of the Homœopathic Medical Society of the State of New York was held in the City Hall, Albany, N. Y., on Tuesday and Wednesday February 10th and 11th. Many valuable papers of interest to Homœopathic practitioners of the state were presented and discussed. After the election of officers and the annual banquet the Society adjourned.

**AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.**—This association having become affiliated with the Congress of American Physicians and Surgeons it is obligatory, under the Constitution and By-Laws of the Congress, that the Association hold its meeting in 1903 and every third year in Washington. The Council of the Association has instructed its secretary to issue a notice changing the place of meeting from Providence to Washington, and fixing the dates May 12, 13, 14 and 15, 1903.

**AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.**—At the Twelfth Annual Meeting of this association, held at Hotel Kaaterskill, Greene Co., N. Y., Sept. 2nd, 3rd, and 4th, 1902, the following were elected officers for the ensuing year: President, Daniel R. Brower, Chicago, Ill.; first vice-president, Maurice F. Pilgrim, Boston, Mass.; second vice-president, Charles F. Osman, Boston, Mass.; secretary, Clarence E. Skinner, New Haven, Conn.; treasurer, Richard J. Nunn, Savannah, Ga.; executive council, Robert Newman, New York City; W. H. White, Boston, Mass.; F. B. Bishop, Washington, D. C.; Ernest Wende, Buffalo, N. Y.; Charles O. Files, Portland, Me.

**WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION.**—The Eighth Annual Meeting of this association will be held in Indianapolis, Ind., April 9-10-11, 1903. An exceptionally fine program has been

arranged and papers covering a wide range of topics of vital interest and importance will be presented and discussed by leading specialists.

**PLAGUE IN MEXICO.**—The bubonic plague has become epidemic in Mexico and stringent measures have been taken by the United States Health Authorities to prevent its spread to the United States. The towns of Oso, Ensenada and Mazatlan are the centres of the contagion at present. The Authorities have instituted rigid sanitary regulations, which have required the presence of troops to enforce and a premium has been placed on rats dead and alive.

**PERSONAL.**—**DR. MARTIN J. DWYER** (A. M. C., '83), has removed to 527 West 162nd Street, New York City.

**DR. E. W. BALTES** (A. M. C., '97), is practicing at No. 203 West Railroad Avenue, Albuquerque, N. M.

**DR. DANIEL A. MCCARTHY** (A. M. C., '99) has removed from 768 River St., Troy, N. Y., to 3042 Sixth Ave., of that city.

**DR. FRED B. WEAVER** (A. M. C., '98) has been appointed surgeon for the New York Central and Hudson River Railroad for that portion of its line extending from Poughkeepsie to Tivoli. Dr. Weaver resides in Hyde-Park-on-Hudson, N. Y.

**DR. ALVAH H. TRAVER** (A. M. C., '98) has been appointed Assistant Attending Surgeon to the Albany Hospital.

**DR. GEORGE P. COOPERNAIL** (A. M. C., 1900), is located at Bedford, N. Y.

**DR. M. JOSEPH MANDELBAUM** (A. M. C., '02) has left service in the Albany Hospital and opened offices at 191 Hudson Avenue, Albany, N. Y.

**DR. JOHN F. HEFFERNAN** (A. M. C., '01) has opened his offices at No. 746 Broadway, Albany, N. Y.

## Current Medical Literature

### SURGERY

Edited by **A. Vander Veer, M. D.**

*The Causes of the Twisting of the Pedicle of Intra-abdominal Organs.*  
(*Ueber die Ursachen der Stieldrehung intra-peritoneal gelegener Organe.*)

**ERWIN PAYR.** *Archiv für klinische Chirurgie*, Bd. 68, Hft. 2.

Twisting of the pedicle of intra-abdominal tumors is not of very rare occurrence and concerns for the most part tumors of the ovary, uterus and omentum, although the spleen, appendix, Meckels' diverticulum and other organs may present this condition.

The writer reports a case of an ovarian cyst with a twisted pedicle and with secondary omental adhesions which supplied to the tumor most of its nourishment. Torsion of twice 360 degrees had occurred in the omental adhesions and in the pedicle and yet there was no necrosis of the tumor.

The case led the writer to investigate more carefully the causes of twisted pedicle, which in general appear to be of two varieties—extra-abdominal and intra-abdominal. In pursuing the study of this condition the writer performed a number of experiments upon rabbits in whose

omentum he produced gas cysts by the introduction of small pieces of metallic magnesia into the omental tissues. In certain of these cases more or less marked twisting of the pedicle occurred. Attention is called to the fact that the veins in the pedicle of practically all tumors are larger than are the arteries and are also more elastic; furthermore, the veins are more easily compressed than the arteries and thus from slight pressures may become much distended with blood. In such an instance the writer finds that the swollen veins tend to arrange themselves in more or less of a spiral form around the arteries and other tissue of the pedicle as a center and thus a marked tendency toward torsion of the tumor is presented. The same tendency is seen in the appendix when it becomes greatly swollen and distended, the mesentery being inelastic, the organ cannot straighten out, and thus comes to assume more or less of a spiral arrangement around the mesentery as a center. This undoubtedly explains certain of the twisted malformations of the appendix. From his studies the writer draws the following conclusions:

(1) The external causes of twisted pedicle should be distinguished from the internal, due to conditions of growth or circulation. In some instances the former are responsible, while in some instances the latter are, and in still other instances both external and internal causes are combined.

(2) The growth of a tumor and the changes in its equilibrium play a most important role in the development of torsion of the pedicle.

(3) The size, weight and consistency of an organ or tumor are very important factors in the causation of torsion of the pedicle. Those with long pedicles become twisted more easily than those with short ones.

(4) The blood vessels of the pedicle may play an active role in the production of torsion. Marked dilatation of the veins of the pedicle may produce experimentally a torsion of the pedicle.

(5) These mechanics of torsion may be of importance in the production of torsion of other hollow viscera occupied by gas or fluid, as in volvulus, etc., etc.

*A Case of Tumor of the Spinal Cord Treated by Operation. (Ueber einen operativ behandelten Fall von Rückenmarkstumor.)*

H. OPPENHEIM. *Berliner klinische Wochenschrift*, September, 29, 1902.

The writer reports the case of a young woman of eighteen who complained of pain in the right abdominal region and legs with some loss of power in the legs. There was no disturbance of the function of bowel or bladder. The patient presented a well marked left scoliosis as well as a spastic paraparesis, the right leg being more involved than the left. The patellar tendon reflexes were greatly increased, ankle clonus was present in the right leg, as well as Babinski's sign. Sensory disturbances were also quite marked in both legs as well as over the lower abdomen; more marked on the right side. Girdle pain was present. Stimulation below the level of the umbilicus failed to produce the abdominal reflex while stimulation above the umbilicus did produce it. The case was observed for a time and all the symptoms grew worse. The spastic condition of the legs became more marked, the sensory disturbances more pronounced and irregular in distribution, while Babinski's sign became evident in both legs.

There was no tenderness to be elicited along the spine and aside from the scoliosis nothing abnormal could be detected. Extension was tried for a time, but the symptoms grew worse rather than better. Tuberculin given for diagnostic purposes did not produce a reaction and in view of all the symptoms the writer made a diagnosis of tumor within the spinal canal probably taking its origin from the membranes of the cord. The scoliosis also spoke for the presence of a tumor, for the association of these conditions is well recognized. The symptoms pointed to the location of the tumor between the tenth and twelfth dorsal segments, situated at about the eighth dorsal vertebra. At the operation which was performed by Sonnenberg the spine and transverse processes of the eighth and ninth dorsal vertebrae were resected. The tumor was found situated beneath the dura and closely attached to the arachnoid. It was removed without injury to the spinal cord, which appeared to be much compressed. The tumor had originated on the right side and had grown toward the left, thus explaining the more marked symptoms on the right side. The tumor, which measured 3 x 2 x 1 centimetres, was found to be a pure fibroma. The patient made an uninterrupted recovery. The paralytic and other symptoms rapidly disappeared and at the end of two months she was almost completely restored, practically all the symptoms having disappeared. The scoliosis was also much improved and the writer is inclined to think it was due to the attempt on the part of the patient to relieve herself of the pain caused by the tumor on the right side of the body.

*The Intestinal Action of Atropin. (Zur Darmwirkung des Atropins.)*

PAUL OSTERMAIER. *Muenchener medicinische Wochenschrift, September 9, 1902.*

The writer reports six cases of strangulated hernia in which the hypodermatic administration of atropin in rather large doses was followed by the reduction of the hernia, either spontaneously or with slight manipulation in from a few minutes to a few hours after the administration of the drug. Both the subjective and objective condition of the patients was immediately improved after the first administration of the drug. The writer calls attention to the experimental and clinical report of Hagen from the laboratory of Schmiedeberg, in which the writer concludes that the action of atropin consists in an excitement of peristalsis together with a contraction of the vessels of the mesentery, both of which occur from one to two minutes after the injection of the atropin.

It would appear that a certain quantity of atropin must be in the circulation before this effect is produced and this quantity differs in different cases. The writer advises to begin with a rather large dose, from one to two milligrams and to repeat every half hour or hour until the desired effect is obtained or until toxic symptoms appear. Five milligrams is about as much as the average individual will tolerate.

As to the action of atropin there appears to be a great diversity of opinion, some observers claiming that it paralyzes peristalsis, while others claim that it stimulates it. Clinical experience, however, seems to demonstrate that atropin stimulates peristalsis. In addition to its stimulating action, atropin also relieves the tetanic contractions of the intestine which



occur in certain cases of ileus. The contraction of the mesenteric vessels is also of great importance, not only because of its effect upon the local conditions, but also because of the stimulating effect upon the heart and the circulation, both of which are greatly benefited by the increased blood pressure, as well as the increased quantity of blood driven toward the heart. In strangulated hernia this contraction of the mesenteric vessels is of the greatest importance in aiding reduction. The action of atropin upon the intestine in strangulated hernia, as well as ileus in general, may be due either to an increased peristalsis in the uninvolved intestine or to the production of peristalsis in the atonic portion of the intestine. In the causation of many cases of ileus, atony and spasm of the intestine, as well as extreme congestion of the mesenteric vessels, are of the greatest importance. The writer calls attention to an article by Blos in which the beneficial effects of atropin after operation upon cases of general peritonitis is emphasized, the peristalsis being stimulated and at the same time the pain being so alleviated that morphine can in many cases be omitted. The writer urges the use of atropin not to take the place of operation, but rather as an excellent method of after treatment when ileus develops.

### PÆDIATRICS

Edited by Henry L. K. Shaw, M. D.

*The Use of Calomel in Pediatrics. (Ueber Calomel in der Kinderheilkunde.)*

SCHOEN-LADNIEWSKI. *Jahrbuch für Kinderheilkunde, August 1, 1902.*

Trousseau was the first to urge the use of calomel in treating children. On account of his strong recommendation, physicians all over the world began to use it, and it now occupies the position of specific for all the ailments occurring in childhood. The author believes the pendulum has swung too far, as the domain of calomel therapy belongs exclusively to the intestinal tract. It should not, however, be classed among cathartics, such as castor oil, senna, etc. The author gives indications of its use. As a disinfectant of the alimentary canal it is of great value in colic, dyspepsia with vomiting and greenstools, in acute gastritis, subacute and chronic gastro-intestinal catarrh, cholera infantum, eclampsia *exindigestione*, and catarrhal icterus. Few physicians realize the value of calomel as a diuretic. In various forms of nephritis and in the hydrops from heart and liver affections it is one of the best remedies which can be employed. It is also useful in ophthalmic work and as an antisymphilitic.

To give calomel as a routine practice in the beginning of scarlet fever and measles is strongly condemned. Nothing is gained, and the author has seen several fatal cases of diarrhœa follow its use.

The author never employs calomel as a laxative. He prescribes it as an intestinal antiseptic and uses minute doses (0.005-0.02) in divided doses. As a diuretic the dose administered is much larger. Calomel is insoluble in water and is best combined with fine cane sugar. It cannot be mixed as well with milk sugar. The mixture of calomel and sugar may show a trace of corrosive sublimate if kept too long. Several drugs and articles of food are apt to produce the same change. Food containing

chloride, such as salt, etc., should not be given with calomel. A further warning is to keep the calomel in a dark bottle, as it may be decomposed by the sunlight.

The author urges a scientific use of this drug, which in rapidity and certainty of action may be classed with quinine in malaria and antitoxin in diphtheria.

*The Treatment of Enuresis. (Ueber die Behandlung der Enuresis.)*

WALKO. *Zeitschrift für diätetische und physikalische Therapie*, September, 1902.

The author gives a brief historical survey of the theories advanced concerning the pathogenesis of this disease. It has been regarded as a local neurosis, lack of correlation between the sphincters and detrusors, neuroses with and without anatomical changes, congenital or acquired weakness of the bladder sphincters, a monosymptomatic hysteria, etc.

The treatment has undergone many changes. Medicinal treatment has given place to mechanical, hygienic and psychical methods in cases where the incontinence is functional, not symptomatic.

Mechanical treatment in the hands of the author has given excellent results. He employs what he calls combined massage of the rectum. The technique is as follows: The patient lies on the back or knee-elbow position while the physician places one hand over the symphysis, and the forefinger of his other hand in the rectum. The neck of the bladder is lightly masséed for four or five minutes. A daily séance for four or five weeks will bring about a complete cure. The advantages of this method are the ease of application, simplicity, and the short course of treatment required. A series of ten cases of functional or idiopathic enuresis is reported, all responded quickly to this line of treatment and were cured. Three cases of symptomatic enuresis were reported in one of which some improvement seemed to follow the rectal massage.

The author places no confidence in drugs and does not think it wise to use atropin or belladonna. He believes that functional enuresis is a loss of control of a psychical nature in normally developed organs, and is not due to a malformation or weakness of the muscles. For this reason he lays great stress on the psychical treatment and recommends the use of suggestion and hypnosis.

*The Treatment of Scarlet Fever with Streptococcus Serum. (Ueber die Behandlung des Scharlachs mit einem Scharlachstreptococcusserum.)*

MOSER. *Wiener klinische Wochenschrift*, No. 41, 1902.

Marmorek was the first to recommend the use of antistreptococcus serum in the treatment of scarlet fever on the ground that a streptococcus infection is the most frequent and definite pathological lesion. In the article the author gives the results of this treatment in the scarlatina pavilion of the Annakinderspital, Vienna. The streptococci were obtained from the heart blood of fatal cases of scarlet fever. Cultures from the streptococci which had not passed through any animal were injected in horses in increasing doses. After a month of this treatment blood serum was obtained and injected without the addition of any antiseptic.

Eighty-four cases were treated subcutaneously with this serum. The earlier the injection the more favorable was the result. Clinically there was an improvement in the general condition of the patient shortly after the injection, the temperature fell, the pulse was lower, there was an abatement of cerebral symptoms, the exanthem became less hyperæmic and the throat symptoms improved. The complications of nephritis and endocarditis were not avoided, but their frequency appeared to be diminished. No unfavorable results attributable to the serum were observed. The effect on the mortality was marked. In five other scarlet fever hospitals in Vienna the mortality during the same period was 13.9 per cent., while in the Annakinderspital it was 8.9 per cent. The streptococci found in scarlatina differs from those found in abscesses, erysipelas, etc., and the writer strongly recommends a wider use of the scarlet fever serum in the treatment of this disorder.

*The Medical Treatment of Tuberculous Peritonitis. (Traitement médical de la Péritonite Tuberculeuse.)*

COMBY. *Archives de Médecine des Enfants*, October, 1902.

The author gives the histories of four cases of tubercular peritonitis which have come under his care and which were cured spontaneously, *i. e.*, without surgical procedures. The first case was that of a boy, eleven years old, pale and emaciated with marked ascites and a left-sided pleurisy. The child fully recovered.

The second was a girl eight and a half years old with tuberculosis of the bones and both apices of the lungs. The ascites was very marked and resembled that accompanying cirrhosis of the liver. This child ran a remittent temperature for a long time, but finally recovered by rest in bed and removal to the sea shore.

Case three was in a girl ten years of age. There was not much ascitic fluid, but the tuberculous products were limited to two distinct localities and gave the appearance of tumors. There was no fever and the child completely recovered under a simple hygienic treatment.

The last case was in a seven-year-old boy, with a dry form of tubercular peritonitis. The onset was insidious, but later the tubercular nodules could be distinctly felt.

The great prominence given to the favorable results of surgical treatment in tubercular peritonitis has created an impression in the minds of most physicians that this disease is incapable of spontaneous recovery and the only hope lies in surgical interference. Under the term surgical intervention is included aspiration, puncture, laparotomy, and injection of air and various solutions.

The author quotes his cases in order to demonstrate the falsity of such a position. He claims that all cases of tubercular peritonitis except, perhaps, the suppurative, encysted forms, are capable of recovery by medical treatment.

The treatment recommended is absolute rest in bed with plenty of fresh air and sunshine. Removal to the sea shore or mountains is advisable when possible. More stress is laid upon hygienic than medical treatment. Cod liver oil with or without creosote, bandaging the abdomen, painting the abdomen with iodine or collodion are among the measures mentioned.

# ALBANY MEDICAL ANNALS

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## Original Communications

### THE UNUSUAL SYMPTOMS OF THE WEAKENED FOOT.

WITH ILLUSTRATIVE CASES

*Read before the Medical Society of the County of Albany, December  
10, 1902.*

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The normal foot is endowed with two important functions, first to serve as a passive support for the weight of the body, and secondly to act as a lever to raise and propel the body.

In its capacity as a passive support most of the strain is borne by the ligaments and bones of the foot, while in its active capacity the muscles constitute the important factor. The passive attitude is the attitude of rest, while the active attitude is the attitude of motion. The so-called weakened foot is one in which the passive attitude is maintained more or less constantly both during rest and motion. Such a foot is evidently not normal and such an attitude is often the first indication of a disturbance of the function of the foot. To consider in detail the varieties, etiology and pathological anatomy of the weakened foot would lead us far beyond the scope of this paper, the object of which is to call attention to the importance of the early recognition of the weakened foot as well as to emphasize the protean character of the symptoms which may result from it. Naturally too, in the



early stages this condition is most amenable to treatment, which, if properly and intelligently directed, is almost always extremely satisfactory.

In general, five main types of the weakened foot may be distinguished: (1) the congenital, (2) the traumatic, (3) the paralytic, (4) the rachitic, (5) the static. Of these the static variety is by far the most frequent and of the greatest importance. It can generally be assumed to be due to a disparity between the body weight and the passive resistance of the bones and ligaments of the foot.

Henke considers the starting point of the disturbance to be a fatigue of the muscles of the calf and sole of the foot as well as of the tibialis anticus and tibialis posticus, resulting from excessive strain. Normally, these muscles tend to assist in retaining the foot in its correct position, but when their action is eliminated the so-called attitude of rest is assumed, in which the legs are somewhat separated and rotated outward at the knee while the foot is pronated. The attitude is thus one of abduction and pronation of the foot. This attitude may be assumed for a long time without discomfort, but if there chance to be an abnormal lack of resistance on the part of the bones or a laxity of the ligaments or if the body weight be rapidly increased, more or less disagreeable symptoms may ensue. The popular idea that the weakened foot necessarily must present a lessening of the depth of the arch is an erroneous one, for of far greater importance is the position of the foot relative to the axis which supports the body weight. In many instances a foot which is the source of much discomfort will, so long as no weight is borne upon it, present a fairly normal appearance, but when the individual stands upon the foot it will be seen that while the arch may still appear fairly high, the foot is nevertheless abducted and pronated and it is to this latter position that the discomfort is in many instances referable.

The change of relationship of the foot to the leg is usually the earliest sign to appear and is functionally of the greatest importance. The foot appears to be displaced outward so that the line of transmission of the body weight, instead of passing well to the outer side of the internal malleolus, now passes either through the internal malleolus or even to the inner side of it. As a result of this change in the relative

position of the foot the internal malleolus becomes excessively prominent and projects markedly inward and downward, while the external malleolus is less prominent than normal and is displaced slightly forward. Attention should be drawn to the fact that an abnormally low arch is characteristic of certain races, especially the Negro and Hebrew, and it is furthermore not infrequently observed in apparently normal individuals of other races. In individuals who present normally a low arch, the bones have during the period of growth accommodated themselves to this condition, following the law of Julius Wolff, and functional symptoms may be and usually are entirely lacking.

Most writers upon this subject emphasize the period of adolescence as being the time during which the symptoms of weakened foot are most apt to develop, due of course to a rapid increase in the weight and strain put upon the foot. There is, however, comparatively little in the literature relating to the development of the weakened foot in individuals of more advanced years, and this coupled with the fact that many of these individuals do not present the usual symptoms of the disorder, is the source not infrequently of an error in diagnosis. Attention should be more generally directed to the fact that the increase in weight incident to the middle or later life of many individuals is a very important factor in the development of the weakened foot.

The statistics of Whitman from the Hospital for the Ruptured and Crippled in New York are of interest in this connection. Of 1,000 cases of weakened foot treated at that institution, 426 occurred between the ages of ten and twenty, while 220 occurred after the thirtieth year.

Aside from the inherent weakness of the bones or laxity of the ligaments of the foot it is a well recognized fact that certain occupations predispose an individual to the development of the weakened foot. These are occupations which necessitate long hours in the standing posture, when, as already stated, the feet tend to assume the passive attitude of rest. Waiters, cooks, porters, bar tenders, factory hands and nurses are among the most frequent sufferers from this disorder. Another exceedingly important factor in the etiology of the weakened foot is the modern shoe. The shoes worn by individuals who attempt to conform to the

dictates of fashion 'tend to abduct and compress the front of the feet and individuals who wear such shoes stand and walk with the feet abnormally abducted. This position of the foot tends to the development of weakness by causing abnormal strain upon the inner side of the foot associated with a tendency to pronation of the foot. Weakened foot is not often seen among those races who either go barefoot or wear shoes which do not compress the foot. The custom which appears to prevail to-day is to make the foot fit the shoe instead of the shoe fit the foot.

The symptoms of weakened foot may be of the most diverse character and their development may be sudden or gradual. Furthermore, and a fact which cannot be too strongly emphasized, the weak foot may produce symptoms in other parts of the body unassociated with any subjective disturbance of the foot. Of the symptoms referred to the foot a sensation of weakness or fatigue along the inner side of the foot or ankle is one of the earliest. This may be felt only after a long day on the feet or it may develop rather suddenly after over-exertion. A characteristic of this sensation is its disappearance when the individual lies down and this may be said to be also true of many of the actual pains associated with the weak foot.

The pain in the foot tends to localize itself in three places as first pointed out by Hueter: (1) along the inner edge of the foot in the region of the tuberosity of the navicular and toward the sole, (2) at the middle of the dorsum of the foot corresponding to the articulation of the astragalus and navicular, and (3) at the anterior process of the os calcis in front of the external malleolus, the result of the pressure of the angle of the astragalus upon the calcis. In many cases the entire region of the heel as well as the metatarso-phalangeal joints are also exceedingly painful.

The pain is, as a rule, felt only when the foot is in use and generally ceases when at rest. It is also frequently worse during damp weather and this intermittent character of the symptoms sometimes leads to a diagnosis of rheumatism. The pain in some cases may be very severe and show a tendency to shoot up the leg even as far as the thigh, and although lessened by the sitting or recumbent posture, it may, nevertheless, prevent sleep during the early hours of

the night. Furthermore, the pain does not necessarily correspond to the amount of deformity present.

Coldness, numbness and at times swelling and perspiration of the feet are not infrequently complained of. Gradually the gait of the individual becomes modified. There is a loss of elasticity and the feet appear stiff and clumsy. The range of motion of the feet gradually becomes more and more restricted and passive motion may be decidedly painful. The stiffness and rigidity of the feet is especially noticeable when the patient arises in the morning or after sitting still for a time, due apparently to the fact that while at rest the foot tends to regain its normal position, which is again altered when weight is borne.

In certain cases the patients complain chiefly of a tendency to sprain of the foot or ankle which naturally results from the weakened condition of the foot.

Cramps in the calf muscles is another of the symptoms sometimes complained of, while in certain cases all of the difficulty is referred to the knee, and especially to the internal hamstring tendons, which, as a result of the altered position of the line of transmission of the body weight, are in a more or less constant state of tonic spasm which in some cases results in a tenosynovitis. In certain other cases the entire trouble may be referred to the muscles of the thigh or gluteal region resulting from the overstretching of the external rotators of the leg at the knee and the hip, and this condition Dane has shown may be associated with tenderness over the points of exit of the sacral nerves. In still other cases the pain and discomfort may be entirely referred to the back.

Hoffa explains certain muscle spasms which accompany severe cases of weakened foot by the traumatic irritation of the nerve terminals distributed to the calcaneo-astragalo-navicular articulations, which in a reflex manner produces tonic contractions of the muscles supplied by the anterior and posterior tibial nerves. Irritation of the terminal filaments of the posterior tibial nerve distributed to certain of the deranged joints of the foot may also lead to most exquisite tenderness along the course of this nerve, which may even be detected along the course of the sciatic. Metatarsalgia, or as it is more commonly known "Morton's Disease," is in some cases directly and solely due to a weakened foot.



Pal has recently called attention to the fact that certain cases of so-called meralgia paraesthetica are due to weakened feet and has especially emphasized the necessity for a careful examination of the feet of all patients presenting this interesting symptom complex. Meralgia paraesthetica was first described by Bernhardt in 1895 and given its name by Röth. It consists of a paraesthesia which is limited to the outer and posterior aspect of the thigh from the ilium to the knee and corresponds exactly to that portion of the leg supplied by the external femoral cutaneous nerve. Pal described cases in which the only symptom of the weakened foot was the meralgia paraesthetica and when proper support was applied to the foot the meralgia disappeared. In a subsequent article Pal has called attention to another of the nervous manifestations of the weakened foot, namely, sciatica. Some of the cases reported by Pal were quite typical of sciatica, and were associated with marked tenderness along the course of the sciatic nerve. In certain other cases the pain was localized more in the gluteal, sacral or lumbar regions, and occurred for the most part during the day with a tendency to cease at night. Naturally these cases do not respond to the treatment usually advised for sciatica and are only relieved by the application of proper support for the weakened foot.

Pal emphasized the fact that both meralgia paraesthetica and sciatica resulting from weakened feet were far more amenable to treatment in the early stages. In some of his cases in which the condition had existed for a long while, only partial relief was afforded by the application of proper support for the feet. This serves to emphasize the necessity for an early recognition and proper treatment of these cases if the best results are to follow. These cases of nerve disorders unassociated with any subjective disturbance of the feet are most apt to consult nerve specialists and are treated in many instances as cases of primary nerve disturbances, the real cause of the disorder being entirely overlooked.

Lesser and Thomaszewski have called attention to the intimate relationship which exists between varicose veins and the weakened foot. The varicosities appear to be primary and the weakened foot secondary, resulting from the atrophy of the muscles of the leg and foot incident to the changes in the veins of the muscles.

The detection of the presence of a weakened foot is in the great majority of cases comparatively easy. A thorough and systematic examination of every suspected case should be made, not only to establish the diagnosis, but also to determine the extent of the changes in the foot. The feet and legs should be stripped and the attitude in standing carefully noted. Not infrequently no evidence of weakness will be detected until weight is borne, when a more or less characteristic deformity will be noticeable. This deformity is almost always an abduction and pronation of the foot and is usually best seen from behind. The foot also appears broader and longer than normal and the dorsum of the foot is flattened. The contour of the foot should also be carefully inspected for in some cases it is the earliest and sole evidence of deformity. Normally the internal border of the foot curves slightly outward and if the feet are placed side by side so that the heels and toes are in apposition, there is a slight concavity between them. If now this concavity is replaced by a convexity when weight is borne the foot is undoubtedly weak.

Examination of the patient's shoes is also of importance, for it shows the distribution of the body weight, and if the shoe bulges inward at the arch or is worn away at the inner side of the sole, it is evidence of a weak foot.

The gait should be carefully studied and frequently the inelastic, clumsy, even stiff, walk makes the diagnosis apparent. One of the earliest signs of the weakened foot is a limitation of the range of motion. Whitman has studied very carefully the normal range of motion of the feet and has compared with this the range of motion of the weakened foot. The motions of especial importance are dorsal and plantar flexion, adduction, abduction, supination and pronation. Normally, an individual should be able to dorsally flex the foot from ten to twenty degrees less than the right angle, and to plantar flex it from forty to fifty degrees beyond the right angle, the range of motion thus being from fifty to sixty degrees. The most important motion to be tested is adduction which in normal individuals is about thirty degrees. This is one of the first motions to show limitation and is one of the earliest signs of the weakened foot. The normal range of abduction is about fifteen degrees while the range of pro-

nation and supination is difficult to determine, the latter, however, being about twice as great as that of pronation.

It is also important to test the passive motion which makes evident the restriction of motion and sometimes brings out points of tenderness.

Finally one should determine the exact bearing surface of the foot. This may be shown by asking the individual to step upon paper blackened over a lamp, when a graphic picture of the bearing surface will be obtained, which may be made into a permanent record by fixing it by passing the paper through either shellac or a fixative. A very simple method is to ask the patient to wet the soles of the feet by dipping them in water and then take a few steps upon either a piece of wood or paper, when the bearing surface will be well shown. Lovett has suggested an ingenious device according to which the patient stands upon a square of plate glass fixed in a table so that in a mirror beneath the table the bearing surface in different attitudes can be seen.

The treatment of the weakened foot has for its object the restoration of the normal position of the foot and the retention of the foot in the normal position. The first element in the treatment is prophylaxis, and this end can best be attained by the exercise of care in the selection of shoes. The shape of the sole of the shoe should conform to the shape of the foot; it should be provided with a broad, low heel and there should be sufficient space in the shoe for the individual movements of the toes. In cases where there is any tendency to weakness, even though there are no symptoms, it is always desirable to instruct the individual in the proper attitude to be assumed in walking and standing. Emphasis should be laid upon the necessity of avoiding the valgus position by throwing the weight on the outer side of the foot, and to guard against abduction by holding the feet parallel in walking. In some instances it is an excellent plan to raise the inner border of the sole and heel slightly to throw the weight toward the outer side of the foot. Exercises are also of the greatest importance in the treatment of the weakened foot and it may be desirable to briefly outline some of the more important exercises suggested by Hoffa.

(1) With the foot pointing directly forward in the standing posture the patient raises and lowers the heels.

(2) The patient stands with the points of the toes in apposition, and the heels turned outward so that the feet enclose a right angle. In this position the heels are raised and lowered while they are turned outward as far as possible.

(3) The patient assumes the same attitude as in (2) and raises the heels, then bends the knees, then straightens the knees and then lowers the heels.

(4) The patient sits with erect back and extended legs, and with the toes turned as far inward as possible, describes circles with the feet.

(5) In the same sitting posture the patient adducts and supinates the feet as forcibly as possible.

(6) The patient should be instructed to stand and walk with the inner edge of the foot elevated as far as possible and when it is necessary to stand for a long time the position of the feet should be frequently changed.

In some cases the modification of the shoes together with the exercises suggested will be sufficient to effect a cure, but most cases require in addition some form of support to hold the foot in the proper position. It is never wise to send the patient to a shoemaker and entrust to him the rectification of the shoe or the adjustment of the proper support, but this most important element of treatment should be carefully supervised by the surgeon.

The supports ordinarily used for the weakened foot do not fulfill the requirements of the condition, simply because most of them are directed only toward the support of the arch and leave out of consideration entirely the far more important element, namely, the abduction and pronation of the foot. A brace, then, to possess the highest grade of efficiency, must both support the foot and prevent the lateral deviation thus holding the foot in its normal position. It must also be comfortable and allow the normal motions of the foot.

Several styles of braces for the weakened foot have been devised, but no one style is applicable to all the cases, although the brace devised by Whitman is probably the most useful in the majority of cases. In order that the brace may fulfill all the conditions, it is necessary that a plaster model be made of the foot, and the brace be made to fit this model. The model can be easily and quickly made in the following manner. Plaster of paris and warm water are mixed until a



thick cream is obtained. This cream is then poured into an oblong pan, or upon a heavy piece of paper and the patient seated in a chair allows the foot to sink gently into the plaster until it rests on the bottom of the pan. No weight, however, is borne upon the foot. The plaster cream is then heaped up along the inner border of the foot to the level of the internal malleolus. When the plaster has hardened the foot is carefully withdrawn, and the mould greased with vaseline. This mould is then filled with plaster cream which is allowed to harden and thus a model of the foot is obtained. The model must be more or less reshaped else the brace would not support the foot in the corrected position. The reshaping is easily done with a knife and will depend to a great extent upon how much correction the individual case requires. Upon the model the style of brace required can be indicated in outline by pencil and the mechanic is expected to produce a brace which is in exact conformity with the model. The brace should extend from the middle of the heel to just behind the ball of the great toe, the internal portion should rise well above the navicular and cover the internal aspect of the arch while the external portion covers the calcaneo-cuboid junction and rises high enough to hold the foot securely, usually from one to two centimeters. Minor modifications may be necessary to suit individual cases.

Sheet steel is perhaps the best material of which to construct the brace, although phosphor bronze, aluminum, celluloid and vulcanized rubber have been used. All of the latter, however, are not sufficiently rigid or else too heavy. The brace may be nickel plated or it may be covered with leather. Such a brace can be worn inside the shoe and after the patient becomes accustomed to it, the presence of the brace will no longer be noticed. The action of such a brace is to clasp the foot and hold it in the proper or adducted position, thus resisting and preventing the tendency to abduction and pronation as well as furnishing a support to the arch. If treatment is instituted early it may be necessary to wear the brace for only a few months or until the normal position of the foot can be retained without a support. Other forms of support, such as cork or leather insoles, etc., are to be advised against, for under the action of the body weight they become compressed so that they do not furnish the proper support, and

furthermore, they do not tend to correct the abduction and pronation.

Sampson, of Baltimore, has recently called attention to the great importance of properly constructed shoes in the treatment of the weakened foot. The essential features of the shoes advised by him, are adduction with an avoidance of compression of the ball of the foot and the toes. Each individual is provided with a last, which is made according to certain measurements taken by the surgeon, and over this last any intelligent shoemaker can construct the proper kind of shoes. Within such shoes any form of properly constructed brace can be worn.

The following cases illustrate some of the more uncommon symptoms of the weakened foot and are merely referred to in order to emphasize what has been said in regard to the necessity for a careful examination of all cases in which there is a possibility of the existence of this condition.

*Case I.* Aged 43. Has always been a strong, healthy woman, and has been very fond of walking and outdoor exercise, but because of some tenderness of the balls of the feet has not of late years walked as much as formerly. During the past ten years the patient has gained decidedly in weight, which at present is over 200 pounds. About three years ago the patient was troubled for several months with pain and tenderness in the region of the internal cuneiform bone of the left foot. This, however, yielded to counter-irritation and strapping with adhesive plaster and there has been no recurrence of the trouble since.

About two years ago while spending the summer in the country, the patient was in the habit of taking rather long walks across the country. In the course of one of these she leaped across a small brook and soon after experienced a sense of discomfort in the tendons behind the left knee, this troubled her for some time, but after a while disappeared only to reappear in a short time and for about a year she had more or less constant discomfort which gradually became worse. She described the sensation as one of strain in the tendons, associated at times with some sharp pain. When seen by the writer there was well marked tenderness over the internal hamstring tendons, associated with a distinct fine crepitus

indicative of teno-synovitis. The glands in the popliteal space were also somewhat enlarged. Applications of iodine and the Paquelin cautery with rest relieved the condition greatly, so that the patient was able to walk with more comfort than she had for months. Finally, however, after rather more than ordinary exercise on the feet, the trouble recurred, and the patient also began to suffer with occasional severe cramps in the muscles of the left calf. At no time had there been any pain or discomfort noticed in the feet. Examination, however, of the feet in the standing posture, showed moderate abduction and pronation with a slight weakening of the arch, most marked in the left, but also noticeable in the right. There were no tender points about the feet and the range of motion was almost normal. In the sitting or recumbent posture the feet appeared absolutely normal and the arches high. The condition was, however, unmistakably one of weakened feet.

In the meantime the patient began to complain of a feeling of strain and discomfort in the hamstring tendons of the right knee, and an occasional cramp in the calf muscles of the right leg. The ankles were at first supported with felt pads and as soon as the patient became accustomed to these, plaster models were made of the feet and steel braces applied which entirely corrected the deformity, and the use of which entirely relieved the discomfort about the knee and the cramps in the calf muscles. The plates were, however, somewhat uncomfortable for a time, because of the extreme sensitiveness of the skin of the feet.

*Case II.* Aged 57. Patient had always been a strong, healthy woman until about twenty-five years ago, when she fell and sprained her left ankle, from which she recovered, but after a few months she began to have severe pain in the instep which gradually became worse so that the patient was compelled to use crutches for about six years. During this time the foot was fairly comfortable so long as no weight was borne upon it, but it would swell and become hot and painful if any attempt was made to use it. After using crutches for about six years the patient consulted a surgeon who advised and performed some tenotomies upon the foot which afforded great relief so that she was able to give up

the use of crutches for about fourteen years, during which time she walked with a limp and some weakness of the foot and ankle but no pain. In 1897 the patient began to experience pain in the foot which seemed worst just under the arch and which was so severe after bearing weight upon the foot that she was again compelled to use crutches. From 1897 to 1901 the patient consulted a great many physicians and surgeons and received a variety of opinions, but no relief. Among this number was a celebrated orthopedist who put the foot in a plaster cast for three months, after which it was much worse. For the past five years the patient has used crutches continuously. If she attempted to bear weight upon it she would not experience much discomfort at the time, but after a few hours the foot would swell and become very sore and hot. During the past ten years the patient has increased quite rapidly in weight until at present she weighs about 200 pounds. She has never had any trouble whatever in the right foot or leg. On examination of the left foot it was found to present an unusually well shapen, high arch even when weight was borne. There was almost no abduction or pronation but all of the motions of the ankle joint were restricted. There was considerable tenderness on palpation of the astragalo-navicular articulation and slight tenderness under the heel. The posterior tibial nerve was most exquisitely tender along its entire course from the inner side of the foot to the popliteal space. This tenderness was most marked just behind the internal malleolus. The muscles of the foot and leg were somewhat atrophic, but otherwise normal, and the stiffness of the joints of the foot and ankle seemed to be largely the result of disuse. Because of the extreme sensitiveness of the astragalo-navicular articulation and the junction of the posterior tibial and plantar nerves it was difficult at first to induce the patient to endure even a thin felt support beneath the arch. Gradually the thickness of the support was increased and the patient was encouraged to bear weight upon the foot which she could do with progressively less discomfort as the felt pad was thickened and the support became more marked. After some weeks she could walk with considerable comfort and then a plaster model of the foot was made and a steel brace replaced the felt pads. As soon as the patient became accustomed to the



brace she experienced progressively more comfort until now, about six months after she began to use the brace, she walks with almost perfect comfort. The tenderness has practically entirely disappeared from the astragalo-navicular articulation, as well as along the course of the posterior tibial nerve.

With the very minimum of deformity this patient had experienced the maximum of discomfort, and the case illustrates well the disproportion which frequently exists between the deformity and the discomfort. For years a slightly weakened foot had made a cripple of an unusually active woman, and although seen and examined by a number of physicians, surgeons, and even orthopedists, the condition had been overlooked.

*Case III.* was a young woman of 22, who consulted the writer a few months since. She complained of pain and discomfort about both knee joints, most marked in the right. She had always been fairly strong and healthy as a child. In 1897, after having been on her feet a great deal and having climbed stairs much more than she was accustomed to, the patient began to have pain and discomfort about the right knee joint. This was localized for the most part over the hamstring tendons and along the inner side of the joint. The patient thought there was slight swelling of the knee joint at the time, but there was never any redness of the skin over the joint. The pain and discomfort were always relieved by rest and appeared to be aggravated by excessive use. This trouble had continued for five years with little or no change except when for longer or shorter periods she would not use the leg when it invariably improved, but as soon as she was on her feet much the trouble would recur. During the past five years she has consulted a great many physicians and surgeons who have made various diagnoses and have instituted a great variety of treatment. For thirteen months the knee was kept in a plaster cast by one surgeon under the supposition that it was a case of tuberculosis of the knee joint. Upon another occasion the knee was vigorously cauterized, while a great variety of salves, ointments and external applications have been applied at one time or another; none of which methods of treatment except rest have ever afforded the slightest relief.

About five months ago the patient began to have similar

trouble in the left knee joint which has gradually grown worse, until when <sup>first</sup> first seen by the writer she was able to be up and around only with constant discomfort in the region of the internal hamstring tendons of both knee joints. For the past three months the patient has had some cramps in the calf muscles of both legs. These cramps always came on after she retired at night. For the past two years the patient has also had some pain and discomfort in the right gluteal region. The patient says that she has never walked with a limp and the motion of the knee joints has never been impaired. When closely questioned the patient said that for ten years past she had had more or less trouble with her feet, which consisted in weakness with some pain and swelling when she was compelled to be on them much. For the past year she has had some pain under both arches <sup>as</sup> as well as below the external malleoli. All of the symptoms in the feet and knees have always been relieved by rest and have recurred only when weight was borne upon them.

During all the years that she has been under treatment the patient says that an examination of the feet has never been made.

The patient was a healthy looking young woman, weighing 113 pounds. Examination of the knee joints showed them both to be normal in every respect. There was, however, some tenderness over the internal hamstring tendons on both sides. There was also slight tenderness over the right gluteal region.

In the standing posture both feet were decidedly abducted and pronated, the right slightly more so than the left. Both arches appeared weakened and the bearing surface of both feet was increased. The internal malleoli were abnormally prominent. When the patient walked there was no limp and but slight stiffness of the motions of the feet; they were both, however, carried and placed on the floor in an abducted position. Active motions of the feet were somewhat restricted, especially adduction. There was some tenderness beneath the astragalo-navicular articulations as well as below the external malleoli and over the lower portions of the posterior tibial nerves. Passive motions were practically normal. In both the sitting and recumbent postures the weakening of the arches was evident. The arches were sup-

ported with felt pads, to which the patient soon became accustomed, and which entirely relieved all the symptoms in the knee joints as well as in the feet. Plaster models of the feet were made and steel braces substituted for the felt pads, as a result of which all pain and discomfort has disappeared from both knees and feet and the patient is able to be on her feet practically all day with perfect comfort.

Weakened feet were then responsible for all the inconvenience and suffering experienced by this patient whose symptoms had led to erroneous diagnoses and ineffectual treatment simply because the significance of the symptoms was incorrectly interpreted and the examination of the feet neglected.

*Case IV.* E. G. V., aged sixty-two years, complained of inability to walk and pain on the outer side of both thighs. Aside from nervousness, the patient had always been strong and healthy up to the onset of the present illness. She has always been very heavy and says that since she was seventeen years of age she has weighed from 200 to 240 pounds. The present illness began about ten years ago with severe cramps in the calf and thigh of the right leg, which came on especially at night. These cramps were localized more on the outer side of the right thigh. The cramps gradually grew worse until about four and one-half years ago, when the patient became practically unable to use the right leg in walking. For the past four and one-half years the patient has been able to walk only a very few steps at a time and has always required assistance. For the past five years she has had pain and soreness along the outer side of the right thigh, which was localized in the region supplied by the external femoral cutaneous nerve. This pain and soreness were present more or less constantly, often when the patient made no attempt whatever to use the leg, and at times was so severe as to prevent sleep. There was never any numbness, tingling or paraesthesia, and never any redness of the skin over the area supplied by this nerve. About three years ago the patient began to have similar trouble in the left thigh, which resembled in all characteristics that experienced in the right, but decidedly less severe.

The patient says that she has had weak ankles since childhood and there was always a tendency for the ankles to turn.

The patient has never had any pain or discomfort in the feet at any time, except for about one year five years ago, when she had a tender spot under the right heel. This disappeared, however, after massage, and has never returned. She has never sprained the ankles and has never noticed any restriction of motion of the feet or ankles or any stiffness. During the first five years of her trouble she consulted a number of physicians and surgeons, and a variety of diagnoses were made, the most constant of which, however, was that of rheumatic gout, but there were never any evidence of either gout or rheumatism. Her general health has remained fairly good.

On examination the patient was found to walk with the feet decidedly abducted and pronated. The arches of both feet were also distinctly weakened. There was slight restriction of abduction and supination of both feet. There were no tender points in either foot. Careful examination of the sensation over the region of the thighs, to which the severe pain was referred, failed to reveal any disturbance whatever. There was, however, decided tenderness on pressure over the point of exit of both external femoral cutaneous nerves from the pelvis.

The arches of both feet were at first supported with felt pads, which resulted in almost immediate relief of all of the discomfort and with which the patient was able to walk more comfortably than she had for years. Plaster models were made of both feet and the patient was provided with Whitman steel supports together with shoes so constructed as to assist in adducting the feet. To these she soon became accustomed and has experienced practically complete relief from all of the discomfort to which she has been subject for years.

This case appears to be a fairly typical instance of that symptom complex to which the name of meralgia paraesthetica has been given, which has been briefly referred to above and which has recently been described by Pal as resulting from weakened feet.

In conclusion special emphasis should be laid upon the necessity for the careful examination of the feet as a part of every routine, physical examination, for the weakened foot is not a trifling condition, but one which may entail a vast



amount of suffering and may embitter the life of the individual afflicted. If recognized and properly managed the prognosis is excellent and there are no deformities which the physician or surgeon sees in which such satisfactory results follow the employment of intelligently directed treatment.

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FOR THE ANNALS

## OCEAN TRAVELING AS A THERAPEUTIC MEASURE.

By JOHN HALL, M. D.

It is undoubtedly true that nothing gives the hard-worked physician, on his constant never ending routine, greater pleasure than to be able to order travel for his patients. At once there comes before the mind's eye the memory of days spent in Berlin or Paris or amidst the beauties of the Yellowstone, and unconsciously he half envies his patient. The pleasures of travel have been sung since the days of Homer and Virgil, and it is an underlying principle that a change of scenes has a marvelous effect upon the mind and body. The exertion of travel also has been diminished both on land and sea, until to-day, it seems scarcely more exertion to go to London or San Francisco than it was a hundred years ago to go from New York to Philadelphia.

I will however endeavor to take up the therapeutics of travel and try to see what there is in it from a rational standpoint, divesting it of its romantic glamor. In the first place taking up the subject of ocean travel, let us see what the climate of the sea is, what is its life, and what influence it can have on healthy and diseased conditions, with a final attempt to find what diseases should be adapted for the sea voyage.

While it is true that it is wrong to talk about the climate of the sea as if it were an unvarying factor for the climate of the Arctic Ocean varies from that of the Indian Sea, therapeutists nowadays acknowledge that we may talk about a "sea climate" in a way that we cannot refer to any "land climate," for on the ocean there are certain factors which are always present; these are the salt water, the free sweep of the atmospheric currents, a uniform surface material, a level

surface together with freedom from the various source of contamination or alteration found everywhere on land. It is obvious to the dullest mind that the variations of mountain chains, deep valleys and inequalities of the surface influence evaporation, radiation, sunlight, etc. So it is with the surface material; it exerts the greatest power over climate; forests, lakes, desert plains and fertile fields, all affect it in innumerable ways.

The leading characteristics of the "sea climate" are the purity of the air, the humidity and the equability. Taking up the purity of the atmosphere, we can see that this purity is almost absolute, for there is nothing local to affect it; occasionally fine dust is carried far over the seas as was seen in the recent eruption of Mount Pelee on the island of Martinique, but this is so rare and insignificant a factor that it can be practically ignored. Sailors often talk of "sea dust," which is particles of salt water blown up by the winds, but this is no impurity. High mountain air is known to be comparatively pure but it is never so clear of contamination as ocean air. Again, as we would expect, the humidity of the ocean air is marked; it is the common experience for articles not in constant use to mildew. This humidity frequently reaches the point of saturation and not uncommonly plays around the ninety mark. Of course it may vary considerably, being less in the drier air of the northwest trade winds than in the region of the equatorial calms. Still this important fact must be remembered that these changes are never sudden.

To Americans great changes in temperature are not uncommon as we can all testify. These alterations may be most extreme; even in the British Isles the temperature has been known to drop forty degrees in less than half an hour. But on the ocean it is astonishing how little the temperature varies, not only from day to day but even between day and night. Out in the ocean away from disturbing influences the diurnal range is about five degrees. Of course in inland seas, the range is great as on land; the Mediterranean and Red Seas are notorious for their sudden dangerous changes of temperature.

There are some lesser factors in the therapeutics of the sea as follows: The sunlight is as a rule abundant, so that "sun

baths" are a possibility. Again the ozone is abundant and exerts a noticeable effect on the nervous system, while of course the barometric pressure shows a high range.

The next question is the character of the life at sea and its influence upon healthy and diseased organisms. The principal feature of life at sea is the complete muscular repose. At the same time the absence of the cares of the day renders the mental quietude almost as great; the over worked business man can not receive or send any letters or telegrams, despite the efforts of Marconi as yet, and the traveller can enjoy, if he will, almost complete rest. At the same time the boat is in motion, which to many is a source of exhilaration. This can be regulated by the traveler himself; if he is unable to take regular walking exercise or even to ride easily in a carriage on land, yet in his easy chair on deck he can be soothed with soft breezes and stimulated by the sense of steady progress.

The explanation of the inertness of the average traveler on the sea is probably in the fact that the motion of the ship satisfies for a time the instinct of "doing something." There are no unpleasant duties to be done and the days slip away in quick succession; the ordinary worries and excitements of life are lacking. The character of the patient and his capabilities as a sailor have much to do with his possibilities of enjoyment. Acquaintances are formed; card players can indulge in their amusements; there are many ship games, such as ship billiards, etc., while some lines, such as those of the Pacific Ocean, now supply swimming tanks and a sort of vaudeville in the way of wrestlers, boxers and various athletic sports. Again if the passenger is of a scientific cast of mind, he can study navigation, or astronomy or microscopy. Here the previous history of the patient has much to do; with a well disciplined mind the invalid can make time pass pleasantly.

The other side of the shield presents a different picture. There are many persons who never feel first-class on the water; with them the writer can sympathize thoroughly, for he never feels right on the ocean despite many trips. The life seems to lock up his secretions; he becomes bilious, constipated, dizzy and headachy even in the steadiest of weather.

There are many persons who never get over this condition.

I well remember the first mate on an ocean liner who confessed to me that he had been on the ocean since he was eight years old and had been seasick all of that time. The lapse of years did not improve his failing in this direction at all. Again, the life is circumscribed and the sleeping apartments are small and overcrowded. The pleasures are restricted and the traveler may miss terribly some home comfort. Again the occurrence of bad weather is depressing even to good sailors for food is hand served and digested with difficulty, amusements are cut off, exercise is prohibited and sleep is interfered with.

In this connection comes up the relative value of the sailing vessel and the steamer; everything on the steamer is at a higher pressure, from the rate of speed, to the life and the food. The food is better on the steamer, the people are generally more congenial and the steady speed is pleasant, but to many the noise of the engines is unpleasant, the noise and animation is fatiguing and the true salty flavor is less prominent. If the prospective traveler can find a good clean sailing vessel, with a good cuisine it would be well to consider such means of transportation.

There is no doubt that the sea has two influences in the therapeutic realm; firstly, it is sedative; secondly, it is a tonic. As a tonic its influence is seen in the increased appetite and a gain of weight. The sunlight, the hours spent in the fresh air, the constant motion are all acting. The condition of biliousness which often appears is apt to disappear in the course of a long voyage and a period of great gastric activity sets in. The gain in weight may be phenomenal. Patients have been known to gain thirty-five and forty pounds during a trip to the Antipodes. The ability to digest large amounts of food may become astounding. Here the patient must use some discretion and exercise as much as possible, else he will return too fat and out of condition.

The sedative action of the sea is seen in the humidity of the air, the high range of the barometer, the equability of the climate and the absence of the ordinary "cares that infest the day." The sea to many is too sedative, depressing rather than soothing; the lonely expanse of waters, the moaning of the winds, the monotonous expanse of sky and water, together with the sense of isolation from all humanity,



may tend towards melancholy. The patient should endeavor to counteract this feeling by creating a homelike influence about him in his daily life.

In nervous breakdown, ocean travel has been recommended for many years; overwork, overworry or dissipation has sent many passengers sailing all over the globe. It is astonishing how many men recovering from the effect of sprees are sent out on European steamers; the surgeon of one boat told me that scarcely a trip did he take without one or more of these cases under his care. The result in his experience was bad, for there is a certain amount of strain on these cases and to be thrown into the confining life of a ship acted badly and the majority developed more or less signs of delirium tremens. In sending cases of this sort away we must be sure that the life will agree with the patient; he must have a certain amount of comforts and steady, light amusements. The Mediterranean trip is excellent for these people, for these boats carry bands and have regular concerts and other means of amusement, while the trip is diversified by the sight of the Azores and Gibraltar. The trip to Jamaica is also good but short and apt to be very stormy.

In cases of convalescence from various diseases, the ocean trip may be used but not until the patient is practically well. All acute signs must have disappeared. Also in such cases as the various forms of hay asthma the voyage may do good; although many cases report no improvement because of the dampness of the boat. Scrofulous and laryngeal cases are generally much benefited if properly selected.

The use of ocean trips for phthisis has been fought back and forth for years. Some years ago two English physicians, named Williams, tried it extensively, sending many cases to and from Cape Town, New Zealand and Australia. Seventy-two per cent. of their cases were among the first stage, eleven in the second and sixteen in the third. They claim very favorable results, eighty-nine per cent. being improved while only five per cent. grew actually worse. Flint, in his investigations, has come to the conclusions that the "sea voyage has a favorable influence on phthisis." Yet the ocean voyage for consumptives has been fiercely assailed as bad therapeutics. Yeo has been the principal opponent of this measure and he claims that it is of very doubtful value. If we accept

the modern idea of altitude and dryness in the treatment of phthisis the ocean trip is certainly not valuable. This is undoubtedly the present status of the question with the profession. Lindsav, an English authority, believes that in selected cases the ocean trip is good; these cases are as follows:

- (1) Incipient cases, especially in young people and in the male sex;
- (2) Cases complicated with nervous breakdown;
- (3) Cases in which prolonged sedentary employment in bad air seems to have been the exciting cause of the disease;
- (4) Cases with a moderate amount of anemia;
- (5) Lymphatic and scrofulous cases;
- (6) Cases that have arisen from delayed convalescence after pneumonia, pleurisy or of typhoid fever.

When it comes to the question of land travel the same problems arise; it is probably better to be cautious as to advice. The worry and excitement of travel is still considerable, especially in cases of definite nervous diseases, such as paresis. Chase, in his recently published work on this subject, says as follows: "At this time the question of travel will force itself on the attention of the physician. The word "travel" is attractive to the mind of the overworked physician and patient; in truth it has a sweet sound to most ears. But it is now generally recognized that traveling of any kind is conducive of more harm than good to the parietic patient attended with its hurry, annoyance and excitement."

We must judge each case on its own merits but it is well not to send a patient travelling haphazard just because he happens to have the means.

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## ALBANY HOSPITAL.

FIRST REPORT OF PAVILION F, DEPARTMENT FOR MENTAL DISEASES, FOR THE YEAR ENDING FEBRUARY 28, 1903.

By J. M. MOSHER, M. D.,

Attending Specialist in Mental Diseases.

### *To the Board of Governors:*

I have the honor to present the first report of the operations of Pavilion F for the year ending February 28th, 1903, and also for a few days in February, 1902, which covers the period from the opening of the pavilion.

The first patient, a case of drug addiction, was received on February 18, 1902. She was discharged much improved; has since recovered entirely, and has expressed her great satisfaction with the treatment and care received at the hospital.

Organization was effected by the selection of a supervising Committee of the Board of Governors and the appointment of an attending physician, and of a nurse-in-charge, who possessed special training and qualifications.

A resumé of the work of the year is shown in the following table showing the forms of disease and the result of treatment:

FORM OF DISEASE	Recov- ered.		Im- proved		Unim- proved		Died		Remain- ing		Total		TOTAL
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Acute delirium.....	2	6	.	.	.	.	.	1	.	.	2	7	9
Confusional insanity.....	2	.	1	1	.	.	.	.	1	.	3	2	5
Melancholia.....	4	4	5	12	4	9	.	.	1	2	14	27	41
Mania.....	.	.	2	2	3	3	.	.	.	.	5	5	10
Primary dementia.....	.	1	1	.	1	1	.	.	.	.	2	2	4
Recurrent insanity.....	.	.	.	2	.	.	.	.	.	.	.	2	2
Chronic delusional insanity	.	.	.	1	4	2	.	.	.	.	4	3	7
General paralysis.....	.	.	1	.	5	.	.	.	1	.	7	.	7
Terminal dementia.....	.	.	2	3	4	3	1	.	3	2	10	8	18
Imbecility and idiocy.....	.	.	3	11	.	.	.	.	1	.	3	2	5
Acute alcoholic delirium....	26	.	5	2	1	.	2	.	1	.	35	2	37
Drunkness.....	7	1	5	.	.	.	.	.	.	.	12	1	13
Drug addiction.....	1	1	1	1	.	1	.	.	.	.	1	3	4
Ptomaine poisoning.....	.	2	.	.	.	.	.	.	1	.	3	.	3
Uraemia.....	.	.	.	.	.	.	1	.	.	.	1	.	1
Puerperal eclampsia.....	.	.	.	.	.	.	.	1	.	.	.	1	1
Epilepsy.....	.	.	.	.	1	.	.	.	1	.	2	.	2
Neurasthenia.....	.	.	.	1	.	1	.	.	.	.	.	2	2
Hysteria.....	1	.	.	.	.	.	.	.	.	.	1	.	1
Exophthalmic goitre.....	.	.	.	1	.	.	.	.	.	.	.	.	1
Transferred to Pavilion C on admission.....	.	.	.	.	.	.	.	.	.	.	1	.	1
Totals.....	42	15	26	27	23	20	4	2	8	6	106	68	174

This table shows that one hundred and seventy-four patients were admitted. Of the admissions, four patients were directed to Pavilion F from the Out-Patient Department for Mental and Nervous Diseases and twelve were transferred from other departments of the hospital, eight of these being surgical cases, one ophthalmological, one obstetrical and two medical.

Of the patients discharged improved and unimproved, forty-one, or twenty-three and one-half per cent., were transferred to State hospitals for the insane. Of these, twenty

were transferred in one week or less, five during the second week, eight between two weeks and one month, four during the second month and four between two and four months.

The causes of death were: exhaustion from acute delirium, cerebral tumor, meningitis, pneumonia and delirium tremens, uraemia and puerperal septicaemia.

These statistical results give information as to the work of the year and the probable function of Pavilion F. It will be remembered that the establishment of this department of the hospital was largely an experiment. As the pioneer in its special field it had none of the benefits of tradition or experience upon which to plan its work. The physicians of Albany had had long acquaintance with the suffering incident upon the emergencies of mental diseases, and had been daily confronted with the disposition of patients whose needs exceeded the resources of the home. The inevitable result was recourse to the police and the jail with eventual commitment to an institution for the insane, even for transient disturbances, when temporary care would often have resulted in the restoration of health.

The design of the new Albany Hospital, with its distinct pavilions, combined into a harmonious group by connecting corridors, suggested the opportunity for the relief of these distressing conditions. It was proposed by the Medical and Surgical Staff that an additional pavilion be constructed for mental cases. This was endorsed by the Medical Society of the County of Albany, and upon the representation of the Staff and the Society, the County Board of Supervisors responded promptly with an appropriation for construction and furnishing. Following the notation of the Hospital wards the new department was designated Pavilion F, thus happily escaping any distinctive or suggestive title, and bringing into prominence the fundamental fact of the modern conception of insanity, that it is disease, and that its victims are entitled to the same consideration as the bodily sick or injured, and present a claim for treatment which a hospital should not ignore.

Many important questions are in process of solution at Pavilion F. It has been demonstrated, in this first year, that mental patients of all classes may be received upon voluntary request and that a small minority resent the confinement and



cannot be held. Of the patients who, from dissatisfaction with the surroundings, homesickness, or other cause, withdraw, several have returned to their homes benefited by their short stay, and others have finally needed the intervention of the law and formal declaration of insanity. The number of malcontents is not greater than in other departments of the Hospital.

The length of time patients should remain is still undetermined, and probably no definite rule can be established. It is well known that developed cases of mania and melancholia require for successful treatment at least three months, and usually from six months to a year. Liberal provision for public patients has been made by the State, and County authorities very properly do not feel that they are justified in duplicating this expense. For such cases the pavilion has offered a temporary refuge, where proper management may be ordered during the complicated process of commitment to a State Hospital, which requires several days. Some of these patients might be successfully treated in Pavilion F were the cost of maintenance provided. A particularly embarrassing situation has developed in several instances where friends of patients, evidently by self-denial, have met the cost of maintenance for a few weeks, and have then found themselves unable when active symptoms have subsided and convalescence has begun, to longer bear the burden. Under such conditions a transfer is absolutely harmful to the patient and jeopardizes the prospect of recovery. We have felt the need of a fund to meet these emergencies, and believe there could be no greater charity than that which promotes the recovery from acute attacks of mental disorder, which are often the result of overwork and privation. The gift of five hundred dollars from a sympathetic friend, which your Board has set aside as the nucleus of an endowment fund, the income of which is to be applied to the treatment of worthy indigent patients, points one way out of this difficulty.

There is another class who need greater resources than are afforded by this small institution. These are patients who are best treated by the diversion of amusement or occupation. For them the equipment of the modern hospital for the insane, which represents the evolution of a large experience and special study, is necessary and adapted to a cure. We

have noticed a general and ill-founded prejudice against hospitals for the insane and reluctance on the part of both patients and their friends to seek their protecting care. This arises partly from ignorance and partly from the wish to avoid the legal declaration of mental incompetency. Part of this might be avoided by less complicated forms of admission, and we understand that a recommendation has been made to the present legislature, looking to voluntary admission to State hospitals.

It may be said in this connection, and as a result of anxious study of the possibilities of our Pavilion, that in certain probably curable cases, we have failed to secure results. This is a demonstration of its limitations, from which it appears that patients whose condition does not demand the active medical treatment provided by a general hospital, should not be too long detained, when so-called moral or mental methods, diversion by occupation or by well ordered recreation, are necessary for distraction of ideas from a morbid to a normal channel.

It appears consequently that we have done more than establish an emergency hospital for temporary care. Prospect of cure has been extended to many patients whose minds have been seriously involved. The principle may be stated that *any patient, whose case may be regarded as curable with the means at hand, should be offered the ministrations of this pavilion.*

The satisfactory result of the year's work is in greatest measure due to the nurses, who have met our requirements with enthusiasm. The employment of trained women nurses upon men's wards has been generally advocated and largely adopted in institutions for the insane, but this is probably the first time women nurses have been entrusted with the entire care of all cases.

The order and neatness of the men's wards, the absence of objectionable behavior and the respect for the gentler sex which mitigates even the greatest mental restlessness, give valuable evidence of the success of this innovation. We are particularly indebted to Miss Anne Dewar, the nurse in charge, for her faithfulness and intelligent comprehension of the often vexatious problems presented. The managers of the Training School for Nurses have fixed upon ten weeks of continuous service as the period of training for each nurse

in Pavilion F, and we hope that this plan may soon be put into operation.

The pavilion, as a novelty in hospital work, has attracted wide-spread attention and has been frequently visited by physicians and others. The Governor of the State, in his annual message to the legislature, notes its work and recommends the construction of institutions of this character in other cities. The local public officials have been enthusiastic in praise and co-operation and a liberal appropriation for enlargement has been made by the County Supervisors. This extension was not desired for the sake of greater accommodation, although the number of patients will be doubled, but rather for better classification, that turbulent cases may be received without offense to those who desire quiet. We do not wish to shirk responsibility, but to admit any patient whose condition gives promise of cure, whether troublesome or submissive, and this we believe will be accomplished without friction with the addition to the present building proposed by our architect.

#### FINANCIAL STATEMENT

Received from public patients at \$6.00 per week.	\$1,878 10
Received from private patients .....	3,286 66
	<hr/>
Total .....	\$5,164 76
The number of days' treatment.....	4,197
The average income from each patient per week..	\$8.614

The following estimate of the extra cost to the hospital, per annum, for Pavilion F, is based upon the statements of last years' Hospital Appeal and upon a daily average of twelve patients in Pavilion F and 141 patients in the general hospital wards:

For nursing service .....	\$1,404 00
For provisions and supplies.....	2,664 00
Coal, lighting, etc.....	606 00
Gas .....	79 00
Laundry.....	20 00
	<hr/>
Total estimated expense.....	\$4,773 00

In conclusion, certain acknowledgements should be made. Members of your Board have given time and advice much beyond the technical requirements of your official relation. The visiting staff of the hospital have given their services willingly and patients have had attention from all of the special departments whenever desired. The Commissioner of Charities of Albany, Hon. William H. Storrs, has been courteous and considerate and has maintained most harmonious relations between his Department and the Pavilion.

The following gifts have been received: From Mrs. McCarthy, five hundred dollars, from Dr. Hun, a book-case and books and other furniture; from Mrs. C. P. Williams, couches, chairs and rugs; from Mrs. Hand, lawn seats, window curtains and Fairbanks' scales; from nurses at different times, flowers; from Miss Hotaling, paintings; from Mrs. P. K. Dederick, Jr., flowers; from Mrs. Frederick Tillinghast, Mrs. P. K. Dederick, Jr. and Mrs. W. L. Learned, magazines and books; and from Dr. Gerald Griffin, flowers.

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## ALBANY HOSPITAL

### REPORT OF THE PATHOLOGIST ON THE WORK DONE FROM MARCH 1, 1902, TO MARCH 1, 1903.

BY GEORGE BLUMER, M. D.

#### *To the Board of Governors:*

I have the honor to submit the following report:

The work performed during the time mentioned has been of the usual character, that is to say, it has consisted of autopsies, examination of surgical specimens, examination of curettements, and miscellaneous examinations, such as Widal reactions, examinations of sputum and urine. In all 1024 examinations have been made during the year; of these 49 were autopsies, 555 examinations of surgical specimens, 220 examinations of curettements, and 200 miscellaneous examinations.

The autopsy work at the Albany Hospital was extremely satisfactory from the point of view of pathological interest,



but has been extremely unsatisfactory so far as the equipment of the autopsy room is concerned. The room which by courtesy is known as the autopsy room, is situated in the basement of one of the wards, is lighted during the day by a single, very small window, and at night by a single incandescent light. The room is absolutely devoid of running water, is insufficiently lighted, insufficiently heated, and has no conveniences for the conduct of autopsies before the students. It is certainly not worthy of a well equipped modern hospital, such as the Albany Hospital is, and the pathologist would respectfully suggest the very urgent necessity of a properly equipped autopsy room. Aside from the room itself the conveniences for the care of the bodies are rudimentary in the first degree. In well equipped modern hospitals there is usually some arrangement by means of which the bodies can be kept on ice until removed or autopsied. This method of preserving the bodies is not only of great importance to the pathologist, but also to the undertakers who have charge of the bodies and the friends of the patients. It would seem to be a short-sighted policy that did not adequately provide for some such disposal of the dead. The pathologist would, therefore, suggest that any portion of the building which is given over to autopsy purposes should contain, besides a properly equipped autopsy room, the proper means for preserving the bodies of dead patients.

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### Clinical and Pathological Notes

*A Late Laparotomy for Gunshot Wounds of the Intestines; Eleven Perforations; Recovery.* BY JAMES H. MITCHELL, M. D., Surgeon to the City Hospital, Cohoes, N. Y.

Read before the Medical Society of the County of Albany, January 14, 1902.

There is perhaps no field in surgery that receives more attention than gunshot wounds of the abdomen. The death rate is nearly ninety per cent. In the treatment of gunshot wounds we have palliative and operative measures. In the recent wars it has been shown that when a small calibre, long-range rifle is employed, the aperture is so slight that the indications for operative measures are less imperative than was

the case with the old, large calibre bullet, especially in those cases where the wound has been received after a long period of fasting. It has also been shown by these war records that there are not a few cases in which patients recover without operation. Dr. Paul F. Eve, of Nashville, Tennessee, in a paper read before the Medical Society of Tennessee, said: "Viewing the mortality resulting from operative interference, which has occurred in the past eight or ten years, many of the military surgeons have decided that in the vast majority of such wounds, received on the battle field, the abdomen should not be opened." Now in the light of calm reason, let us look at the treatment which generally governs punctured wounds. The law laid down is to cut to the bottom of such a wound and allow it to heal from that point upward. In penetrating and perforating wounds, especially those of the abdominal cavity, I am fully persuaded that there is but one sure and safe treatment, and that is immediate operation. By such treatment only can the surgeon retain his peace of mind and feel that he has done his duty. That fact that in perforating wounds of the abdomen the majority of patients die if left alone, from septic peritonitis, due to the escape of the intestinal contents into the peritoneal cavity, as well as the knowledge that almost ninety per cent. die even with operation, forces this conclusion on me. In this connection I desire to report a case that recently came under my observation.

G. L., aged twelve years, a school boy born in Scotland, residing at Clifton Park, Saratoga County, accidentally shot himself on July 23d, 1902, at about 6 o'clock, p. m. The pistol used was a single barreled one commonly used for blank cartridges. It was loaded with a twenty-two calibre short cartridge, the bullet of which had been cut down almost to a needle point. While carrying the pistol in the hand with the index finger in the guard, the butt slipped from the hand and the pistol, revolving upon the index finger, as an axis, was accidentally discharged. The bullet entered the abdomen in the median line about one and one-half inches below the umbilicus. After the accident the patient walked about one-half mile, then fell to the ground and was carried home. A physician was sent for and arrived about 10 p. m., when the patient was given a hypodermic injection of morphia. On July 24th, at 8.30 o'clock, a. m., the patient arrived at

the Cohoes hospital, having been conveyed a distance of seven miles in a farm wagon. Upon examination, I found marked symptoms of shock, the pulse was 130, the face pale and anxious. I ordered him to be prepared for operation at once. He was given 1-20th grain of strychnine hypodermically, and Dr. Caruth began the ether at 9 45 a. m. At 10 o'clock he was placed upon the table, just sixteen hours after the accident occurred. At this time, assisted by Drs. Archambault and Furbeck, and in the presence of several other physicians, I began the operation. An exploratory incision was made in the median line over the bullet wound. On opening the peritoneal cavity free fluid and berry seeds were found; there was also distinct evidence of general peritonitis, the intestinal coils in some places being slightly adherent to one another. A careful examination of the intestines was made, care being taken not to expose more than six or eight inches of intestine at a time, and eleven perforations were found. Six of these were wounds of entrance and five of exit, the intestine about the latter perforations being very dark and almost gangrenous. These perforations were carefully closed with Lembert sutures and the abdominal cavity was flushed with normal salt solution, which washed out berry seeds and other material. A very large quantity of salt solution was used. During the operation the patient became cyanosed and was in a state of collapse, the pulse rate reaching as high as 170 per minute. Strychnine, 1-10 grain, was given hypodermically, and one pint of normal salt solution subcutaneously. The abdominal cavity was drained by strips of iodoform gauze. The line of incision was partly closed with cat-gut sutures, leaving the lower portion well open for drainage. Before leaving the table the patient was given atropine, 1-100 grain, hypodermically. The patient was removed from the operating room at 11.45, with a temperature of F. 97 2-3 degrees, a pulse of 160 per minute, and respirations of 28 per minute. Whiskey, one drachm, was given every half hour, and at 3.30 p. m., the temperature was F. 100 degrees, the pulse 120 per minute, and the respirations 48 per minute. At 8 p. m., the temperature was F. 101.6 degrees, the pulse 130 per minute, the respirations 44 per minute. Strychnine sulphate, 1-20 grain, was given, hypodermically; also a saline

enema (one pint), which was retained. At 1.30 a. m., July 25th, the temperature was F. 102.4 degrees, the pulse was 160 per minute, and the respirations 28 per minute. Strychnine sulphate, 1-30 grain, was given with whiskey, hypodermically. At 5.30 a. m., a saline enema was given but returned with particles of fecal matter. The saline enemata were repeated every four hours, one-half ounce of whiskey being given with each enema. During the morning, and up to 4 p. m., the patient's condition remained unchanged, the pulse rate running between 120 and 140 per minute. At 4 p. m., emesis, the material vomited being dark brown in color and of a very offensive odor. During the attack of vomiting the urine was voided involuntarily and the patient sank into a state of collapse with cyanosis, cold extremities, a rapid, weak and barely perceptible pulse, and pronounced delirium. An enema of one pint normal salt solution was given and one-half ounce of whiskey, which was expelled. Normal salt solution was introduced into the chest wall and every three hours an enema of whiskey, one ounce, strychnine sulphate, 1-30 grain, and four ounces of normal salt solution was given. At 7.30 p. m., the temperature was F. 102 degrees, the pulse was 176 per minute, and the respirations were 36 per minute. At 9 p. m., emesis occurred, the vomitus being dark in color and very offensive in odor. The patient remained very restless up to 11 p. m., and then slept. At 12 p. m., no radial impulse could be felt, the temperature was F. 101 degrees, the respirations 36 per minute. The patient slept until 4 a. m., when he became restless and complained of nausea. One-eighth of a grain of morphia was given, hypodermically. At 2 p. m., on July 26th, the third day after the operation, one-tenth of a grain of calomel was given every hour. At 7 p. m., emesis of the same character as before occurred. During this day the majority of the enemata given returned with fecal matter. At 4 p. m., on the fourth day, the temperature was F. 100 2-3 degrees, the pulse was 108 per minute, the respirations were 24 per minute. Calomel was continued during this day until 6 p. m., and at 9.30 p. m., a large semi-solid dejection was obtained. The material passed was washed in the hope of finding the bullet, but this was not obtained. On the fifth day small quantities of water and cracked ice were allowed;



also beef-juice, one drachm every hour. The pulse rate gradually decreased and at 4 p. m., had reached 88 per minute. The bowels had moved at intervals, a small liquid dejection being passed each time.

On the morning of the sixth day three superficial sutures were removed, and in the afternoon the drain was removed and the cavity irrigated with two pints of normal salt solution. The temperature ranged from F. 99.4 degrees to F. 102 degrees, and the pulse from 80 to 100 per minute.

On the seventh day the wound was irrigated with saline solution and one support suture was removed. The external dressings were changed every two hours.

Beginning with the ninth day the following nutritive enema was given three times a day:—Panopepton, one ounce; white of egg; malted milk, two ounces.

On the morning of the tenth day considerable staining was noticed on the external dressing; this gave rise to a suspicion of fecal fistula. The wound was carefully watched and the above suspicion confirmed by the appearance of fecal matter on the dressings, and the passing of gas through the wound. The discharge from the fistula increased, setting up a dermatitis, which was quite severe. To overcome the effect of the discharge, zinc-oxide ointment was applied; but this treatment did not prove satisfactory and was discontinued. The abdomen was frequently washed with tincture of green soap and bathed with a mild bi-chloride solution, and under this treatment the dermatitis rapidly subsided. The cavity around the fistula was packed with iodoform gauze and a moist bi-chloride dressing used externally. Enemata, both saline and nutritive, were continued and small quantities of milk and coffee were allowed by mouth. The kidneys and bowels were acting freely and the patient was quite comfortable, the temperature ranging from F. 99 degrees to F. 101 degrees, the pulse from 80 to 100 per minute.

On the seventeenth day the patient was placed on liquid diet. The discharge from the fistula did not decrease and the cavity had to be cleaned morning, afternoon and evening, the discharge at times being liquid and at others pasty, so as to be easily lifted by strips of gauze. I am greatly indebted to Dr. John Adey, who did these dressings, as well as to the nurses who gave him most excellent care.

On the forty-sixth day the patient was placed in a reclining chair and moved out into the open air. The following day he was allowed to walk around. No evil effects were produced by this exercise, and it was continued till the fiftieth day, when the patient was placed on a strictly dry diet. The iodoform gauze was discontinued at this time and the cavity drained by plain sterile gauze soaked in balsam of Peru. The patient was kept off his feet and a compress used over the external opening of the fistula. The calibre of the fistula gradually decreased and on the fifty-eighth day the drain was discontinued, the patient was put to bed with compresses used over the site of the fistula and this treatment kept up until the sixty-second day, when the patient was allowed to sit up. On October 1st, 1902, sixty-nine days from the day of the injury the patient was discharged as cured.

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### Editorial

Being young, I studied physic, and began  
 To practise first upon the Italian;  
 There I enriched the priests with burials,  
 And always kept the sexton's arms in use  
 With digging graves, and ringing dead men's knells.

CHRISTOPHER MARLOW.

*The Jew of Malta.*

**Alumni Day,**  
**1903**

The alumni meeting for 1903 occurs on the morning of Commencement Day, May 5th. A change has been made in the program, which it is believed will add to the interest of the special feature of these meetings of recent years—the reunions of the decennial classes. About five years ago provision was made in the lecture rooms of the college for the reunions of classes, where old acquaintances were renewed, notes of experiences exchanged and successes recounted. This has resulted in an increase of interest in the meeting and an enlarged attendance, and last year it was found that the calling of the general session interrupted the class reunions. At the suggestion of the president, Dr. Scofield, who has thrown himself heartily into the work of preparation for the coming meeting, these class sessions have been appointed for a later hour, when there will be no occasion for interruptions, and an earnest appeal is made to graduates to

take advantage of the opportunity to renew their college associations. An outline of the morning program is given on advertising page vi. of the present issue of the ANNALS, and a hearty invitation is extended to all graduates of the college to attend on May 5th. The commencement address will be delivered by the Honorable John Cunneen, Attorney-General of the State of New York.

Not long ago a passenger agent of a trunk line railroad system called upon a physician and explained that he had been assigned by his company to look after the annual meetings of medical associations and to secure for his road the transportation patronage of their members. He said that competition had become so active, even between large railroad corporations, that canvassing for passengers had become a necessity of business. He was everywhere treated respectfully by physicians, found them cordial and appreciative, and his lines had been laid in pleasant places. He had had long experience in railroad affairs, and had sought opportunities to investigate the literature of the subject. In his searches he had come upon an ancient circular, accompanied by a map, which had revealed a curious and interesting state of affairs in olden time. From this it appeared that in earlier days certain doubtful expedients due to over-competition were not limited to transportation companies and commercial interests, but even the learned profession of medicine had been subjected to their baneful influence. As a layman he was pleased that he now lived in an age of such high civilization that the contemporary physician was absorbed in the scientific side of his profession and free from selfish considerations. He then described what he had read. It appeared that the office of president of the greatest medical society in existence at the time had been the coveted prize of professional distinction. In the year described by the circular he had found the contest for this honor was apparently very active, and what seemed to him to be a disgraceful subornation of the transportation companies was put into operation. It was intimated that the agents of these companies had been instructed to arrange a series of expeditions from different parts of the world, and to hold out to their patrons the

Nil Nisi  
Bonum

advantages of travelling in parties. The Black Sea Navigation Company, for instance, was to provide galleys which would bring delegates from the far east; a man called Aesculapius was vaunted as the attraction of this company. A physician named Porta was designated as the leader of the migration from the south, and the expedition across the Bosphorus was captained by a person with a peculiar name which was indistinct in the circular, but might have been Rhazes. In the far west Linacre collected trained bands of surgeons and physicians, and Cullen came from the far north with a formidable array of picturesque plaided and bare-kneed Scots, who represented, in the words of the circular, a mountain of common sense and talent. Thus from the west and the east, the north and the south, large parties were converging toward a central point. So far, said the railway man, the plan seemed a marvel of ingenuity, but its purpose had not been revealed. It appeared, he said, that a master mind moved the scheme. When these different parties met at a given point, they found large caravans awaiting them, with which to proceed in one compact body. Then it was shown that a gigantic political manœuvre had been manipulated. There were decorations innumerable and placards and banners, booming the candidacy of a man whose name was not distinct in the circular but it was indicated that he was a great surgeon who was near to the French king, and had not approved of the massacre of St. Bartholomew. There was a blurred word, which might have stood for his name, but also might have indicated his residence, as it was something like Paris. At any rate, in a burst of enthusiasm the delegates moved on with acclamations under the magic of his name. It was not shown that this man had instructed his friends in this demonstration, but after his triumphant election, in the presidential appointments, the names of the men who have been mentioned as leading the various delegations appeared so prominently, that pre-election agreements were strongly suggested. All of which went to show, in the mind of the railway man, that in the middle ages political methods had penetrated the innermost circles of the profession of medicine. The railway man further shared with the modern physician the satisfaction that none of these methods now prevail. He realized that honors are not sought by the ways



of the ward politician, for then they cease to be honors. Advancement in societies is not now for the glory of ambitious individuals, but rather that each deserving man may share with his fellows in the perfection of organization by assuming whatever duty is assigned to him. In the spring-time when the doctor's fancy lightly turns to thoughts of annual elections, he now views the matter not in a self-seeking mood, but rather in the modest spirit described by Addison when he says, in *The Spectator*, "To an honest mind the best perquisites of a place are the advantages it gives a man of doing good."

The Second Annual Report of the Director of the Antitoxin Laboratory of the State Department of Health has been recently transmitted to the Legislature. In it is first outlined the plan upon which the work has been conducted. The laboratory first directed its attention to the production of diphtheria antitoxin, and about the first of April of last year the general distribution of this remedy began. The antitoxin is intended for use in state and charitable institutions, and for the treatment or immunization of those unable to purchase the remedy. Supplies have been distributed directly to state institutions and to local health officers, who further distribute it to physicians needing it.

From the last of March, 1902, to the first of January, 1903, applications were received from the health officers of thirty cities, one hundred and sixty-one villages, and one hundred and seventy-one towns located in fifty-seven counties in the state. Diphtheria antitoxin has, therefore, been furnished to an average of over six localities in each county of the state, excluding those constituting Greater New York, which has its own antitoxin laboratory.

To these localities and to state institutions the laboratory has forwarded during nine months the equivalent of 6552 bottles, each containing 1500 units of antitoxin. Of this amount the equivalent of 3016 bottles was sent out during the last three months, or on an average of 1000 bottles a month for that period. The average strength of the serum distributed was 300 antitoxic units per cubic centimetre.

As diphtheria has been prevalent in several state institutions, much antitoxin was supplied for their use.

Extensive epidemics of diphtheria in the Willard and Utica State hospitals, with smaller outbreaks in Craig Colony, Binghamton State Hospital, State Industrial School of Rochester and the State Institute for Feeble-Minded Children in Syracuse, have necessitated the distribution to them of the equivalent of 1500 bottles each of 1500 units of antitoxin. The larger part of this amount was sent to the first two institutions. At the Willard State Hospital twenty-six cases of diphtheria were treated, and about 1300 well persons were immunized with the state antitoxin. No deaths occurred, and none of the persons immunized subsequently contracted the disease. The entire population of 1291 persons in the Utica State Hospital was immunized early in November, and in all thirty-six cases were treated, and 1394 persons were immunized.

Less extensive epidemics have been successfully stopped in their course in the Children's Home of Amsterdam, the Woman's and Children's Hospital in Syracuse, the Albany Orphan Asylum, Child's Hospital and St. Margaret's House in Albany, the Erie County Hospital, Buffalo, and considerable amounts for treatment and prevention have been used in the Buffalo General and Sisters' Hospitals of Buffalo, and the City Hospitals of Syracuse, Binghamton and other cities of the state.

The number of small epidemics and individual cases treated with the state antitoxin cannot be stated nor estimated, inasmuch as but few of the physicians using it have returned the report blanks accompanying each bottle properly filled in. These incomplete returns show that six hundred and eight cases of diphtheria were treated, and over three thousand additional well persons were protected from the disease by means of the state antitoxin. Of these six hundred and eight cases the reports were incomplete in that the final result was not stated in sixty-one, and bacteriological examination showed that twenty-three more were not diphtheria. Of the five hundred and fifteen remaining cases a positive bacteriological diagnosis was recorded in two hundred and forty-four, although clinically the cases were diphtheria. Of the former one hundred and seventy-seven cases, four ended fatally, and of the latter two hundred and forty-four cases, thirty-one did not recover. Two of twenty-three cases shown to be diphtheria

also died. Of the five hundred and fifteen cases there were, therefore, thirty-five deaths, a fatality of 6.7%.

With regard to the antitoxin as a prophylactic agent the report states as follows: "In all, reports have been received indicating that 3024 persons, more or less directly exposed to infection from the diphtheria bacillus, have been treated with immunizing injections of antitoxin. Of these but two developed diphtheria within four weeks."

Three other cases developed diphtheria after immunizing doses of antitoxin, but after longer periods of time, varying from five and one half to eight weeks. The immunity conferred by such injections is not expected to last over a period of four to six weeks, but there are certain persons in whom the excretion of the antitoxin takes place at a more rapid rate.

The report takes up the consideration of the production and distribution of tetanus antitoxin. In response to the notices sent out by the State Department of Health in October that it was prepared to furnish supplies of this antitoxin to be kept on hand and used under the same regulations as control the distribution of its diphtheria antitoxin, applications were received from one hundred and eighty-one health officers, located in one or more places in every county of the state outside of New York City. The equivalent of over a thousand bottles of ten c. c. each have been distributed. Four cases of this disease were treated with it. Two were of the acute fulminating variety, which nothing can stop when once started. In the third the injections were discontinued too early, and the fourth case died from pneumonia, although practically free from tetanic symptoms, owing to the early use of large doses of antitoxin. The report then states that "The improvement in the tetanic symptoms in this case indicates what has been positively demonstrated in numbers of instances by others, and that is to obtain any favorable effect the remedy must be used early, and in large amounts, frequently repeated. This can only be accomplished under conditions where some of the remedy is constantly on hand, and one of the most valuable features of the work of this laboratory is that it permits the keeping of supplies by every health officer to be used as a primary injection, and thus giving them time to receive further supplies from the laboratory".

Concerning the frequency of tetanus and its prevention by immunizing doses the following figures are given:

"That tetanus is not as uncommon as is frequently supposed, it may be stated that during the months of July, August and September there were twenty-nine deaths stated as due to the disease reported to the State Department of Health. This does not include any deaths which may have occurred during that period in New York, Yonkers, Buffalo and Albany. The United States Census for 1900 gives the number of deaths from tetanus in this state during that year as one hundred and forty-seven. Of these, eighty-four occurred outside of New York City. The disease occurs in all parts of the state as is shown by the fact that twenty-nine deaths mentioned above occurred in twenty-six counties, and the eighty-four deaths in 1900 were widely distributed over the entire state. When one considers that the disease in all of these cases could have been prevented by the subcutaneous injection of only ten cubic centimetres of antitoxin, it is surprising that this use of the remedy is not more often resorted to. As a part of the routine treatment of such injuries as are frequently followed by disease, the subcutaneous injection of a preventive dose of antitoxin would be a most simple and inexpensive matter, resulting in no harm whatsoever, and making it practically certain that the disease would not develop."

The report continues with a discussion of the question of standard methods for testing for definite unit strengths of both tetanus and diphtheria antitoxins, followed by a consideration of the recent work on the use of antistreptococcic serum in the treatment of scarlet fever.

The director concludes the report by pointing out the three important aspects of the work, namely, its sanitary, charitable and educational features.

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## Public Health

Edited by Joseph D. Craig, M. D.

ABSTRACT OF VITAL STATISTICS, FEBRUARY, 1903.

### *Deaths*

	1901	1902	1903
Consumption .....	16	16	15
Typhoid fever .....	3	3	3
Scarlet fever .....	0	0	2



	1901	1902	1903
Whooping-cough .....	0	0	4
Diphtheria and croup .....	4	1	0
Grippe .....	4	2	0
Cancer .....	7	8	2
Pneumonia .....	21	14	25
Broncho-pneumonia .....	5	65	3
Apoplexy .....	9	11	5
Bright's disease .....	13	11	16
Accidents and violence.....	13	6	11
One year and under.....	26	11	21
Seventy years and over.....	21	26	31

*Deaths in Institutions*

Albany Hospital .....	10	12	10
County House .....	3	4	8
Home for Aged Men.....	0	0	1
Homeopathic Hospital .....	1	4	1
Little Sisters of the Poor.....	1	1	1
Penitentiary .....	2	0	2
St. Peter's Hospital .....	5	6	1
Public places .....	2	2	0
St. Margaret's House .....	0	3	0

Total number of deaths in 1901 for February, 157; in 1902, 148, and in 1903, 156. Death rate for February, 1901, 18.37, and for February, 1902, 15.12, and February, 1903, 15.94. Death rate for February, 1903, less non-residents, 15.33.

Marriages .....	51
Births, at term.....	90
Premature .....	2
Still .....	5
—	—
Total.....	97

It is probable that no further decrease in the death rate can be looked for until there is a vigorous concerted effort on the part of the profession and the Health Department looking to the limitation of deaths from consumption. All the communicable diseases with the exception of pneumonia and consumption are under control and the monthly death rate from all other communicable diseases is very small. The death rate from consumption continues to be high. It is probable that a thorough system of control would decidedly limit the number of deaths from this disease. The death rate for the city will probably range from 12.5 to 18.0 under ordinary circumstances until the deaths from consumption diminish in number.

WORK OF HEALTH PHYSICIANS

Total number of new assignments.....	85
Total number of calls made .....	491

## INSPECTIONS

During the month 77 markets were inspected, 5 fish wagons, 5 fish markets, 45 milk wagons, 1 milk room and 2 water wagons. There were found and condemned 10 lbs. of mutton, 12 lbs. ham, and 25 lbs. sausage. Two milk peddler's violations were found. Twenty-three samples of milk were taken and 34 tests were made, of which 32 were found to be above the standard and 2 below.

In the Bureau of Sanitation, 37 inspections were made of complaints, of which 3 were of closets, 2 of drains, 6 of plumbing, 2 of filthy yards, 2 of filthy premises, 1 of gas, 2 garbage, 1 stagnant water and 1 unclassified. There were 25 re-inspections made and 14 nuisances abated during the month. Eighteen complaints were found to be without cause, 15 notices were served, 1 citation and 1 reference to the Commissioner of Public Safety.

In the Bureau of Plumbing, 184 inspections were made, of which 110 were of old buildings and 74 of new buildings. Inspection was made of 38 iron drains, 25 connections with street sewers, 28 tile drains, 1 urinal, 39 cesspools, 61 wash basins, 66 sinks, 37 bath tubs, 35 wash trays, 76 tank closets and 10 trap hoppers in yards. Fifty-two permits were issued by the Department, of which 41 were for plumbing and 11 for building purposes. Eight plans were submitted, of which 4 were of old buildings and four of new buildings. Four houses were tested on complaint, and 9 water tests were made. Twenty-eight houses were examined on complaint, of which 21 were found to be valid and 7 without cause. Seventeen re-examinations were made.

## CONTAGIOUS DISEASES

	1901	1902	1903
Typhoid fever reported.....	7	3	10
Scarlet fever .....	4	9	10
Diphtheria and croup .....	75	27	14
Chickenpox .....	0	6	49
Measles .....	3	8	3
Whooping-cough .....	15	0	3
Consumption .....	0	0	3

Number of days quarantined for diphtheria and croup:

Longest..... 31      Shortest..... 8      Average..... 20+

Number of days quarantined for scarlet fever:

Longest..... 39      Shortest..... 12      Average..... 24+

Number of fumigations:

Houses..... 18      Rooms..... 63

## ANTITOXIN

Cases of diphtheria reported.....	14
Cases in which antitoxin was used.....	14
Cases in which antitoxin was not used.....	0

Initial positive	Initial negative	Release positive	Release negative
13	77	9	8
Total, ..... 107			

It is to be noticed that the number of cases of contagious disease is extremely small for a city the size of Albany. The health conditions compare favorably with other cities of the same class.

### THE LAST BLOW TO KOCH'S THEORY.

*Philadelphia Medical Journal, January 28, 1903*

The ill-conceived and prematurely delivered theory of Dr. Koch is destined to pass into the realm of oblivion never to rise again. The scientific world received his startling announcement with a great deal of incredulity and doubt. Yet, coming, as it did, from Koch, it caused the scientists to pause and reflect before they were ready to pass final judgment. It has been also felt that additional experimental evidence for or against the theory was essential to a just and impartial conclusion. Almost a year has passed since Koch made his announcement, a year of painstaking research on the part of a number of able investigators, and now we are ready to sum up the evidence. This has been admirably done by Dr. Salmon, Chief of the Bureau of Animal Industry. In several papers on the subject this able scientist marshalled an array of arguments which prove incontestably that Koch is wrong. At the meeting of the Section on Hygiene and Sanitary Science, a full account of which is given in this *Journal*, two papers were presented followed by a discussion—all three serving as the death-warrant to Koch's theory. Dr. Salmon, in his paper prepared for the section, repeated what he has already said in previous publications and presented his conclusions which leave no room for argument. Dr. Dinwiddie, himself an able experimenter, although somewhat more cautious in his assertions, was nevertheless ready to affirm that the bacilli of human and bovine tuberculosis are not very dissimilar and that Koch's assertion is not based on sufficient scientific evidence. The most effectual work in disproving the false theory, however, was done by Dr. Ravenel, of the Veterinary department of the University of Pennsylvania. Opposed to the theory from the first, he put forward his best efforts to accumulate sufficient experimental data in support of his opposing views. That he succeeded admirably was evident from his discussion at the meeting mentioned. Koch based his assertion on the dissimilarity between the tubercle bacilli of human and bovine origin. Ravenel proves that the two are interchangeable and belong to the same tubercle bacillus group. Koch failed to produce tuberculosis in cattle by inoculating tubercle bacilli of human origin. Ravenel accomplished this by passing the bacillus from one animal (swine) to another, the second animal developing the disease. Koch argued that primary intestinal tuberculosis is rare. Ravenel proves by a considerable number of experiments that pulmonary tuberculosis may result from ingestion of tubercular material, without intestinal lesions being produced. In these cases, the tonsils and mediastinal glands are the primary seats of infection. Koch surmised that bovine tuberculosis is not

infectious to man. Ravenel points to a considerable number of cases of accidental infection with bovine tuberculosis, resulting in some cases even in death.

#### THE MILK SUPPLY AND INFANT FEEDING.

*Philadelphia Medical Journal, January 28, 1903*

With the coming of the summer the milk-problem looms up afresh with all its Gordian knots which the sanitarian has of late made a determined effort to untie. Heretofore, the fitness of milk for consumption was judged only from the amount of fat and the presence of preservatives. (The problem has been largely a commercial one.) Now, thanks mainly to the efforts of Park, of the New York Municipal Laboratory, we are beginning to appreciate the importance of a sanitary standard for the wholesomeness of milk. Milk watered with pure water is a fraud which affects mainly the purse, but milk containing millions of bacteria per c.c. is a menace to public health. Park has shown that the New Yorkers are consuming milk averaging in many cases close to six million bacteria per c.c. Even in mid-winter he found in some samples of milk furnished to the tenements from one to ten and a half millions bacteria per c.c., while in September the number of bacteria ranges from five to over twenty-one millions. We have no reason to think that these conditions are peculiar to New York and do not prevail in other large cities. It is self-evident that such high bacteria content renders the milk unfit for human consumption, especially for feeding infants. Aside from the possibility of the presence of pathogenic germs, the saprophytes are by no means indifferent living substances. Many of them, like the bacillus mesentericus vulgatus and various anaërobes, cause peptonization of the milk-proteids and elaborate dangerous toxins which are the frequent cause of severe gastro-intestinal irritation.

It would appear at first sight that the problem could be effectually solved by sterilization of the milk. Unfortunately, however, the solution is not so simple. Sterilization for half to one hour, as is usually practised, does not kill the spores of the peptonizing bacteria and, what is of greater importance, renders the milk unfit from a dietetic standpoint for infant-feeding. Sterilized milk differs materially from fresh milk both in chemical composition and digestibility. Under the influence of boiling, nearly all of the constituents of milk are more or less changed. There is a loss of proteids and a change in the character of the fat, rendering it less digestible. Lactalbumin is coagulated even before the milk reaches the boiling point (72° C.); the organic combinations of phosphorus are changed into phosphates which are assimilated with difficulty; lecithin is destroyed; the calcium salts are changed into insoluble phosphates, and the milk sugar partially destroyed (Davis and Leeds). Altogether, the changes are of so serious a nature as to render sterilization of milk for infant-feeding a questionable procedure. In view of this fact, pasteurization of the milk has been suggested and is being gradually introduced as the best method of preparing milk. Pasteurization at a temperature of 60° C. does not change the milk in the least and destroys all the vegetative bacteria, including the pathogenic varieties. But even pasteurization possesses serious imperfections. In the first place, the spore-forming peptonizing bacteria



are not affected, the poisonous products of their metabolism are but partially destroyed, and, if the milk is kept in a warm place after pasteurization, both the bacteria and their products multiply to an enormous extent (Park). In the second place, great care in the method of pasteurization is necessary to destroy the tubercle bacillus. It has been shown by Theobald Smith and Russell that, unless the vessel is kept closed so that no scalded "skin" forms on the surface, the tubercle bacillus is not destroyed by the temperatures at which pasteurization is effected. Finally, we are still lacking a convenient and cheap pasteurizer for domestic use.

The entire milk problem resolves itself, primarily, into the question of a sanitary milk-supply. The public should be educated to the demand for a milk containing a minimum number of bacteria. Such a milk, when pasteurized and rapidly cooled, would make an ideal substitute for mother's milk.

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## Society Proceedings

### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held in Alumni Hall, on Wednesday evening, March 18, 1903. The meeting was called to order at 8:45 p. m., the President, Dr. Ward, in the chair. The following members were present: Drs. Ball, Blumer, Carey, Curtis, Dawes, Elting, George, W. H., Happel, Laird, Lempe, Lomax, MacFarlane, Moore, C. H., Moston, Pease, Rooney, Shaw, Steenburg, Sweet, E., Sweet, M. F., Vander Veer, E. A., Ward, Wiltse.

1. *Reading of the minutes of the last meeting.* The minutes were adopted as printed in the ALBANY MEDICAL ANNALS for March, 1903.

2. *Applications for membership.* No names were presented.

3. *Reports and resolutions.* None were made.

4. *Presentation of papers.*

Dr. ARTHUR T. LAIRD read a paper entitled "Recent Studies in Regard to the Morphology of the Diphtheria Bacillus."

The PRESIDENT declared the very interesting and instructive paper of Dr. Laird open for discussion.

Dr. CURTIS believed the subject which Dr. Laird had presented was one of the most interesting scientifically. The most marked feature seemed to be the polymorphism of the diphtheria bacillus. The question seems to be as to whether the different forms have any bearing upon the virulence, and whether they play any role in individuals immune from the disease. In cases in which the bacilli linger for a long time the question as to the isolation of these individuals from the public is a very important one, and many of the profession appear to have become very restive about retaining such persons in quarantine. It is very desirable that bacteriologists furnish data, if possible, to determine the relative virulence of the diphtheria bacilli. He referred to a case in Sandy Hill, where a child was kept in quarantine for three months after having recovered from the disease. If in these cases some degree of relief from quarantine could be secured it would be a great benefit. He recalled the emphasis formerly laid upon the relationship of the water supply, as well as potato mold, to the de-

velopment of diphtheria. He referred to an instance in which diphtheria bacilli were found in a certain lot of cheese, which led to its destruction, after which it was shown that the bacilli present were not virulent. He felt that it must be left to the laboratory to determine whether or not the polymorphous germs are of importance.

Dr. BLUMER referred to the question as to whether diphtheria can be transmitted by individuals who have never had the disease, but who have had the bacilli in their throats, and he stated that this seemed to have been positively settled in the affirmative. Another question is as to whether in cases which have had the disease with a persistence of the bacilli in the throat these bacilli are virulent. Guinea pig tests show that a considerable percentage of these bacilli are not virulent, but Guinea pig tests are by no means positive or final. There are several points in connection with the presence of diphtheria bacilli in well persons which need investigation, especially as to whether diphtheria bacilli are present in the throats of people living in the country as frequently as those living in the cities. Diphtheria bacilli have certainly been conveyed by milk, but the susceptibility of the diphtheria bacilli to heating would tend to prevent their being a serious infectious agent in cheese.

Regarding the question of quarantine in cases where the diphtheria bacilli are present for a long time he believed it depended largely upon public opinion, but public opinion was certainly not educated up to that point at present. Practically it would not be possible to carry out a strict quarantine in all cases for many years to come.

Dr. PEASE stated that as a matter of fact very few investigators have isolated the diphtheria bacilli in pure cultures from cases in which they have persisted for a long time in any large number of cases. He believed that the bacilli are virulent in a large percentage of these cases, as evidenced by the work done by Dr. Park, of New York, as well as by himself. The work of Dr. Denny shows that if the cultures were all treated alike one could state with more positiveness the presence or absence of virulence. The laboratory methods are so much superior to the clinical methods that there should be no question as to the diagnosis. As to the question of release the matter is a more difficult one. Dr. Park, of New York, claims that the granular forms are the forms of the true diphtheria bacilli. His assistant, Dr. Williams, states that she can always find the solid forms in the early cultures when they are present later on, and they are simply the persistence of a bacillus always present.

As regards branching forms Dr. Williams states that she does not regard them as true branching forms, but as a form of conjugation. Dr. Williams' experience with the different types of the diphtheria bacillus led her to the conclusion that certain types were apt to predominate in certain epidemics, so that she was able to say quite definitely from the type of organism present in cultures just where these cultures came from.

Dr. WARD requested information on one point. He stated that in the early days of bacteriological diagnosis cases which were clinically diagnosed as follicular tonsilitis were reported by the bacteriologists as diphtheria, and cases which were clinically diphtheria were reported as not diphtheria. Such occurrences were rare now.

Dr. LAIRD stated that in answer to Dr. Ward's question he could simply state that diphtheria bacilli could produce the clinical picture of follicular tonsillitis, and that membranous sore throat may not be due to the diphtheria bacilli. In answer to the question of Dr. Curtis as to whether any difference in virulence was associated with particular forms, he stated that the granular forms were generally considered the more virulent. He then cited a case showing that the virulence of the bacilli may persist for a considerable time after convalescence.

Dr. GEORGE G. LEMPE read a paper entitled "Chronic Hydrocephalus with Report of a Case with Gigantism."

Dr. WARD declared the paper of Dr. Lempe open for discussion.

Dr. MACFARLANE stated that he had seen the case with Dr. Lempe and that even after a thorough examination there was considerable doubt as to its nature. It seemed natural to consider it some form of acromegaly, but it lacked practically all the symptoms of that disease. He thought that the discovery of an old hematoma might explain the inference with the ventricular movement of fluids, and that this might have acted in some way on the pituitary.

Dr. BLUMER stated that he doubted whether the hematoma acted by shutting off the central canal, inasmuch as it had the microscopical appearances of a fresh hematoma, only the base being organized. He called attention to the fact that cases of hyperplasia of the pituitary gland occur without acromegaly or gigantism, and it seemed probable from this case that gigantism could occur without changes in the pituitary gland. He cited a case in which very marked hyperplasia of the pituitary gland occurred without any evidence of acromegaly or gigantism, unless the thickening of the bones of the skull could be regarded as a very slight form of this disease.

Dr. ROONEY read a paper entitled "Diacetic Acid Poisoning in an Adult, without Diabetes."

Dr. WARD declared the paper of Dr. Rooney open for discussion.

Dr. SHAW stated that he objected to the title of the paper. He thought that the term diacetic acid poisoning was objectionable, as the diacetic acid was an effect and not a cause. The paper was particularly interesting to him on account of the report of cases occurring in children. He had reported three cases of cyclic vomiting a year ago, and had since seen two other cases. He regarded the cases as intestinal auto-intoxication. The most important feature in the treatment was to clean out the intestinal tract. He thought that the entero-clysis acted simply by cleaning out the intestinal tract. In his experience all of the cases had symptoms of constipation.

Dr. ROONEY in closing the discussion stated that in one of his cases, at least, the child had never shown any evidence of constipation. The treatment in this case had consisted in cutting out the fats during the attacks. Just before the last attack the child had gone into a neighbor's house and had eaten a large amount of butter and some fat pork.

Moved to adjourn, seconded, carried.

ARTHUR W. ELTING, *Secretary*.

SAMUEL B. WARD, *President*.

## Medical News

Edited by Eugene E. Hinman, M. D.

**A NEW FRATERNITY AT THE ALBANY MEDICAL COLLEGE.**—A chapter of Omega Upsilon Phi fraternity has been established at the Medical College and will be known as Gamme Chapter. The installation of the chapter was conducted by members of the fraternity from Bellevue Hospital Medical College and Cornell University Medical College. The charter members include men from each class. Although there are already two active fraternities in the college, there is room for another, and as long as the members of the several chapters encourage and live up to the real fraternity spirit much good can result.

**ANNUAL UNION CONCERT.**—The annual Glee and Instrumental Concert, by the students from the several departments of Union University, was given in Centennial Hall, Wednesday evening, March 18. An appreciative audience welcomed the young men and heartily enquired each number. The list of patronesses included many of Albany's leading society people.

**THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR FEBRUARY, 1903.**—Number of new cases, 69. *Classification of cases:* Dispensary patients receiving home care, 2; district cases reported by health physicians, 7; charity cases reported by other physicians, 34; moderate income patients, 26; old cases still under treatment, 30; total number of patients under nursing care, 99. *Classification of diseases:* (New cases)—Medical, 15; gynæcological, 11; surgical, 3; obstetrical, 22, mothers and 16 infants under professional care; dental, 2; transferred to hospitals, 3; dead, 3.

*Special Obstetrical Department:* Head obstetrician in charge of all cases. Medical students in attendance, 7; guild nurses, 3; four cases. Number of visits by obstetrician, 18; by medical students, 25; by the Guild nurses, 30; total number of visits from the department, 73.

*Visits of the Guild nurses* (all departments): Number of visits with nursing treatment, 748; for professional supervision of convalescents, 232; total for the month, 980. Four graduate nurses and four assistant nurses on duty.

*Albany Guild nurses, cost for service:* The Guild has issued a circular showing the rates for nursing care of patients in families of people of limited means and also in families who can afford to pay professional rates. Under the schedule as set forth a good nurse is available in many cases among the people of small means who cannot afford to hire a trained nurse and who, on the other hand, do not consider themselves subjects of public charity. Albany physicians should make more use of these advantages.

**SAMUEL D. GROSS PRIZE.**—A prize of twelve hundred dollars is to be awarded for the best original essay, not exceeding 150 printed pages, octavo in length, illustrative of some subject in pathology or surgical practice, founded upon original investigations, the candidates to be American citizens. The prize will be awarded January 1, 1905. For further particu-



lars address, "Trustee of the Samuel D. Gross Prize, care of the College of Physicians, 219 S. 13th street, Philadelphia, Pa."

**JANUARY STATE EXAMINATIONS.**—The secretary of the State Board of Medical Examiners, representing the Medical Society of the State of New York, reports as follows regarding the January, 1903, State licensing examinations: Total number of candidates, 103; successful, 75; unsuccessful, 28. Of this number eight had previously passed in the medical primary branches. There was but one "honor" licentiate. Fifty-one candidates appeared for certificate of proficiency in the medical primary branches, of which number forty-seven were successful.

**STATE AND COUNTY CIVIL SERVICE EXAMINATIONS.**—The next general examination for the State and county service will be held on April 4, 1903. The following positions are included: architectural draughtsman, assistant electrical engineer, assistant steam engineer, physical instructor, stenographer and teacher in State hospitals and institutions, head teacher in the State School for the Blind at Batavia, pathologist at Craig Colony for Epileptics. Persons who desire to enter these examinations must file applications in the office of the State Civil Service Commission in Albany before noon, March 30th. Application blanks and information regarding salaries and requirements of examinations may be obtained from the Commission.

**HEALTH THROUGHOUT THE STATE.**—The report of the State Department of Health for the year just passed shows that the general sanitary condition of the State is very satisfactory as compared with reports of former years. The total number of deaths during the year was 124,160, making a death rate of seventeen per thousand population. The number of deaths occurring under five years of age is 5,000 less than the average for the past five years. The continued presence of smallpox in the State has raised the mortality of preventable diseases to fourteen per cent. of the total, a total of 442 deaths from this disease. Deaths due to typhoid fever and consumption both show a marked decrease. This decrease seems to have been due to the measures for prevention which are more thoroughly understood by the public.

**THE 1903 STANDARD MEDICAL DIRECTORY.**—The Standard Medical Directory for 1903 is about ready for publication. This volume promises to eclipse all previous editions of this popular work, consisting of about 1,300 pages comprising complete directories of the physicians of North America, colleges, societies, hospitals, sanitariums, mineral springs and, in fact, everything related to medicine.

**ANNIVERSARY OF THE BOSTON MEDICAL AND SURGICAL JOURNAL.**—This well-known journal celebrated its seventy-fifth anniversary with the February edition of this year. From the time of its inception there has been a continuous weekly issue without intermission. Beginning as the *New England Medical Journal* in 1812, then changing its title to the *Boston Medical Intelligencer* in 1823, and finally assuming its present name in 1828, our esteemed contemporary shows a record of which it is justly proud.

**SPECIAL COURSES FOR PHYSICIANS.**—Columbia University will conduct a summer school for practicing physicians this summer under the supervision of the faculty of the College of Physicians and Surgeons. The course will include all the specialties, and clinics will be held at all the leading New York hospitals and clinics. Physicians may register for any of the courses they may select, and students of medicine may register for only three courses which their standing in a regular medical school permits.

**A VICTORY FOR VACCINATION.**—The Supreme Court of Indiana has refused to grant a restraining order to prevent the School Board and the Board of Health of Terre Haute, Ind., from excluding healthy but unvaccinated children from the schools.

**RECIPROCITY BETWEEN STATE BOARDS.**—The State Board of Medical Examiners of Maine and New Jersey have instituted a reciprocity scheme with states maintaining their standards of requirements. After June, 1903, the New Jersey board will require each applicant to file a recent photograph of himself with his autograph signature duly attested before a notary under seal.

**PUBLIC HEALTH IN ENGLAND.**—There is a strong movement on foot among the profession in England to place the efficiency of the Health Department on a higher plane. At a recent meeting of the Exeter Congress a resolution was adopted urging the organization of a Department of Public Health and the creation of the office of Minister of Public Health. Such department is to have complete control, and upon which shall devolve the entire administration of the public health service of the country, with full power to act on its own initiative in respect to all public health matters.

**THE CLASS COCCUS AND SCARLET FEVER.**—In a paper read before the American Medical Association in December, 1902, Dr. W. K. Jaques, of Chicago, discussed very carefully the relation of the Class coccus to scarlet fever. This coccus, he states, is most nearly like the staphylococcus albus, varying in size from a pin point, as seen under an oil emersion twelfth, to a coccus nearly a third the diameter of a red corpuscle. It multiplies by division. The coccus usually gains an entrance through the mucous membrane of the throat and is distributed by the blood. If a previous attack has given immunity to the disease, the germ does not multiply in the blood and the disease does not go further than a simple angina. The ability of the Class coccus to penetrate the tissues is seen in the fact that during desquamation the scales are filled with the germ. The germ may be obtained from the blood by venesection during the appearance of a rash and should be mixed with a large amount of bouillon. After a few hours incubation a cover slip should be pressed on the surface. The smear should then be fixed and stained.

**CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.**—This Congress will meet in Washington, D. C., on May 12, 13 and 14, 1903. It is composed of the members of many national medical societies and of guests especially invited by the Executive Committee. The various societies composing the

Congress will hold meetings independent of each other and discuss the subjects of special interest to their work.

**THE AMERICAN CONGRESS ON TUBERCULOSIS.**—This Congress will convene at St. Louis, Mo., July 18, 1903. The object of the organization is to advance the science of prevention of tuberculosis. Dr. Daniel Lewis, of New York City, is the president of the Congress, and the associate officers include many of the leading physicians of the country.

**TUBERCULOSIS IN NEW YORK.**—The New York Charity Organization has formed a committee on the Prevention of Tuberculosis, whose object is to be the improvement of all the means now at hand for the elimination of this plague and to devise other means for the checking of tuberculosis in the home of the great city. This committee includes men like Dr. Knopf, E. J. Lederlie, the heads of the Charity Organization, University Settlement and the new Tenement House Department. What is done in New York can be done elsewhere, and if the investigations of this committee lead to conclusions that are practicable there can be no doubt but that many other communities will adopt their methods of suggestions.

**INTERNATIONAL CONGRESS OF MEDICINE.**—The fourteenth International Congress of Medicine will convene in Madrid, Spain, during the week of April 23 to 30, 1903. A communication from the secretary general invites the attendance and co-operation of all who are interested and encloses a program for the meeting. All of the departments of general medicine, obstetrics and gynecology will be thoroughly represented. The secretary of the American Committee is Dr. John H. Huddleston, No. 126 West 85th street, New York City.

**PERSONAL.**—Dr. GEORGE B. STANWIX (A. M. C. '98), is located at No. 262 Washington street, Binghamton, N. Y.

—Dr. I. G. JOHNSON (A. M. C. '53), has been heard in communication with the editor and states that he is still practicing his profession although not very actively.

**MARRIED.**—HERRICK-SLAVIN.—Dr. C. B. HERRICK (A. M. C. '80) and Mrs. MARY M. SLAVIN were married March 19, 1903, at Jersey City, N. J. Dr Herrick is one of the leading surgeons of Troy, N. Y., and also a member of the faculty of the Albany Medical College.

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## Book Reviews

*Regional Minor Surgery*, by GEORGE GREY VAN SCHAICK, M. D. International Journal of Surgery Company, New York. 1902. Price, \$1.50.

In this volume of 226 pages, with seventy-four illustrations, the author presents the more important phases of so-called minor surgery, based largely upon his own personal experience. It is, of course, impossible in such a small work to treat the subject at all exhaustively, and yet the most essential points are presented with sufficient detail and clearness to make the volume an exceedingly practical one.

Brief reference is made to the general principles of asepsis, as well as the care of fresh wounds, methods of suture, dressings, etc. A considerable portion of the volume is devoted to the minor surgical diseases of the head, face and neck, following which are chapters devoted to the upper extremity, the lower extremity, the chest, the breast, the genito-urinary system and the rectum.

Of special value are the considerations relating to the minor surgery of the upper extremity, and particularly to be commended is the key-note of conservatism which prevails throughout this chapter, and which is so often disregarded by those who practice more or less minor surgery.

Very little attention is paid to the diagnosis of the conditions whose treatment is discussed, practically all the emphasis being laid upon some one or more proper methods of treatment.

As the author distinctly states, the volume is intended rather for the student and the general practitioner of medicine than for the surgeon. Since it falls to the lot of so many general practitioners to do more or less of minor surgery, and since so much blame frequently attaches to such operations badly performed, it seems quite desirable that some practical volume of this character should be placed in their hands. A. W. E.

*Diseases of the Skin.* Their Description, Pathology, Diagnosis and Treatment, with Special Reference to the Skin Eruptions of Children and an Analysis of Fifteen Thousand Cases of Skin Disease. By H. RADCLIFF-CROCKER, M. D. (Lond.), F. R. C. P. Third Edition. P. Blakiston's Son & Co.

This is a large book of nearly 1,500 pages, this edition being much larger than the previous one by reason of revision and extensive additions. Several years have elapsed since the last issue of this author's book, and he has evidently attempted with success, though somewhat too conscientiously, as it will appear to practical students of the subject, to follow up to the latest the proposed segregations and propositions of magazine and society literature. Much of this individual contribution will fail of general acceptance, both of phrase and description. No department of medical literature has so much useless lumber of nomenclature as has dermatology. For the student, however, the author calls attention on a short page in a good way to the way to use the book and make good suggestions from the standpoint of a practical teacher as to his approach to this subject. Heeding this he will avoid much that would otherwise be confusing. He will find good chapters on the general subject of semeiology, etiology, pathology and diagnosis, and he is advised then to confine his attention to the most common diseases seen at the out-patient clinic, a goodly list of which is given. He needs this, and it is indeed unlikely that any but the trained man will follow understandingly all the titles of this and many other books on skin diseases.

It is a matter of large value, however, to have the contributions and shifting views of many observers brought together and analyzed. The skin has more varied expressions to its pathologic processes than any other organ, and their identity in many ways will long be in



question. It is indeed well to have these passed in review by a well-trained student and practical observer. No name in this department of medicine is better known and regarded than that of the author of this large volume. He knows better than most foreign authors the American phases of dermatology (for unquestionably every country has its peculiarities of expression in skin affection), and he is familiar with the conspicuous authorities of this country. Consequently he writes better than most for the American reader and student. For our uses few can instruct us so well as our own men in skin diseases. Without attempting a detailed analysis of this book, we may welcome it as the latest expression in a large way upon dermatology by a distinguished contributor, which will doubtless be widely consulted by the physicians of this country in which it is issued.

F. C. C.

## Current Medical Literature

### MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

*Researches on the Elimination of Ether by the Lungs. (Recherches cliniques sur l'élimination de l'éther par les poumons.)*

CH. ACHARD and LEOPOLD LEVI. *Archives de Médecine Expérimentale et d'Anatomie Pathologique*, Tome XIV, No. 3, 1902.

The object of the writers' researches was to find some method by which the functional power of the lungs could be measured. They point out that the ordinary methods of physical research merely demonstrate the presence and extent of anatomical lesions, and do not indicate, except indirectly, the physiological changes which have occurred. For this reason they have attempted to formulate a method of measuring the capability of the lungs to excrete certain volatile substances. For this purpose they used ether because that was a volatile substance not normally excreted by the lungs. Their method of procedure was to inject a certain amount of ether subcutaneously into the tissues of the individual, and then after allowing sufficient time for the excretion to begin, to collect the air by aid of a mechanical receptacle and to analyze it. The method of testing the air for the presence of ether which they ultimately adopted was the passage of ether through a solution of bichromate of potash in sulphuric acid. The presence of ether in this mixture has the effect of turning it a bright green color, and by noting the amount of air which must be expired in each individual tested in order to produce the ether reaction, and by comparing the reaction thus produced with a standard test, they are able to compare the excretion of ether in different individuals.

Besides testing normal individuals they tested individuals with acute bronchitis, chronic bronchitis, emphysema and pulmonary tuberculosis. Acute bronchitis had no effect at all upon the elimination of ether. Chronic bronchitis, in spite of the fact that it interfered somewhat with the strength of expiration, did not seriously interfere with the elimination

of ether. Emphysema appeared, in practically all cases, to interfere with elimination. Cases of pulmonary tuberculosis showed considerable variation. Sometimes the elimination was normal; sometimes it was considerably below normal.

They conclude that the elimination of volatile substances by air passages depends less on the anatomical state of the pulmonary parenchyma than upon the ensemble of the concurrence of physiological acts of respiration. They think the research also showed that anatomical exploration alone gives but an imperfect idea of the function of an organ, and they advise that in connection with expiration a number of other volatile substances should be tested.

*The Treatment of Aortic Aneurisms with Subcutaneous Injections of Gelatine. (Zur Frage über die Behandlung der Aortenaneurysmen mit subcutanen Gelatine-injectionen.)*

HALPERN. *Zeitschrift für klinische Medicin*, 1902, Band 46, Heft 1-4.

In 1897 Lancereaux described a new method of treatment of aneurisms by subcutaneous injections of gelatine. The result was so satisfactory in the first patient treated that many put this method to the test.

This method is based upon experiments which tended to show the coagulating influence of gelatine. These experiments are, however, not altogether convincing, as the difference in time of coagulation before and after the injection of gelatine is not great. Then, too the method is not beyond criticism, as it is a difficult matter to determine exactly the beginning of coagulation. It has also been shown that gelatine of itself has no coagulating power except after a loss of blood. The action of the gelatine has been ascribed to different causes—to its acidity, to its destruction of leucocytes, thus freeing the fibrin ferments, and to contained elements which combined with lime.

In spite of different theories the use of gelatine as a hæmostatic has become more extended. Two conditions are necessary for the coagulation of blood—a pathological change in the wall of the vessel and a slowing of the blood stream. These conditions are present only in sack-like aneurisms to which this method should be confined. Diseases of the heart and kidneys are contra-indications to the use of gelatine injections.

Many clinicians have seen favorable results follow this treatment, although they do not attribute all the good results to the injections. Some have had unfavorable results and a few have noted direct injury following the treatment.

The writer treated two cases of aneurism and in order to exclude other factors did not regulate the diet and allowed them to leave their beds as they desired. One of them, however, having *tabes dorsalis*, received iodide of potash. This patient within four weeks received four injections representing fourteen grams of gelatine without improvement. The second patient received nine injections representing thirty-four grams of gelatine. The condition of the patients constantly grew worse. While before the treatment the diagnosis could be made only by radioscopy, later the physical signs became evident.

## NEUROLOGY

Edited by Henry Hun, M. D.

*A Case of Complete Absence of the Visual System in an Adult.*WILLIAM G. SPILLER. *Brain*, Winter, 1901.

Dr. Spiller reports the following case of a boy, T. S., 22 years old, height 3 ft. 7 in., weight 38 pounds. He was an idiot, absolutely helpless and very unclean. The boy was unable to stand alone, if not supported he would fall backward. When supported he could take a few steps and these were of the typical "cross-legged progression" type. His knee-jerks were exaggerated, but no ankle clonus was present. He could move his legs while he was sitting, but there was not excessive rigidity on passive motion. He uttered but a few monosyllables. The palpebral fissures were very small.

Autopsy two days after death.

The body was that of a child about 12 years old; no signs of puberty present. Circumference of head  $18\frac{3}{4}$  inches; length of body 47 inches. The palpebral fissures were very small and the orbits contained but a small amount of what appeared to be fibrous connective tissue. Nothing resembling an eyeball could be found. The optic foramina did not exist and it was impossible to find an opening in their usual situation. No trace of optic nerves, chiasm, or optic tracts could be found. There was no sign of an external geniculate body on either side, and the thalamus on each side had nothing resembling an optic tract passing from it. The posterior part of each thalamus was rounded and larger, perhaps, than one would expect to find it in a case of complete agenesis of the visual system.

The anterior colliculi of the corpora quadrigemina were fully as large and as well developed as the posterior. The occipital lobes were small and the cuneus on each side was small and the calcarine fissure short. The external arcuate fibres were unusually well developed.

The spinal cord was small but otherwise normal.

The cortex of the left calcarine fissure contained many nerve cell bodies, but they were possible slightly less numerous than are cell bodies in corresponding areas of a normal brain, especially in the third, fourth, and fifth layers. The giant cells of the third layer were represented, but were possibly not as numerous as in a normal brain. The fibres of Vicq d'Azyr of the cortex of the calcarine fissure were not very distinct in sections stained by Weigert's hæmatoxylin method, but they were not entirely absent.

The optic radiations of the frontal sections of the occipital lobe were not entirely absent, but the area occupied by them was not very distinct.

Meynert's commissure was normal.

Careful examination of the serial sections failed to show the slightest trace of any external geniculate body on either side, although the internal geniculate body was well developed.

Some few medullated nerve fibres are found within the pulvinar, but those in the posterior portion of the thalamus are much fewer than those in the anterior portions. This contrast is very striking.

The habenula in the horizontal sections appears well developed and the fasciculus retroflexus of Meynert is well stained.

Sections through one-half of the oculomotor nuclei contained many nerve cell bodies belonging to these nuclei, and these cell-bodies appeared to be normal, but possibly not as numerous as cell bodies in the oculomotor nuclei of a normal brain.

Transverse sections of the extra-cerebral portion of the left oculomotor nerves near the cerebral peduncles showed an apparently normal nerve. The nerve was possibly smaller than a normal one, but it contained no sclerotic areas. It contained, however, some areas in which very fine nerve fibres formed distinct groups, but there was a scarcity of large nerve fibres.

Transverse sections of the right oculomotor nerve were very similar to those of the left.

One of the trochlear nerves in transverse sections appeared to be normal and contained nerve fibres of good size, which on staining with Weigert's hæmatoxylin were, perhaps, not quite so close together as normal.

The nerve fibres of the left abducens nerve in transverse section were very small, much smaller than those of the oculomotor and trochlear nerves, but they stained well with Weigert's stain.

The right abducens nerve in transverse section contained many nerve fibres that were much larger than any of those found in the left abducens nerve, but contained no sclerotic areas. Some of the nerve bundles contained very few medullated nerve fibres. The nucleus of each abducens nerve appeared to be normal.

The nerve cells in the anterior horns of the spinal cord were, perhaps, a little smaller than usual, but otherwise were normal. No sclerotic areas were found in the lateral columns.

The conclusions that may be drawn from the case are:

1. The chief "primary" optic centre is the external geniculate body.
2. The pulvinar of the optic thalamus is also an important "primary" optic centre.
3. The anterior colliculus of the quadrigeminal body in man has an important relation to vision.
4. The subthalamic body, the habenula, and the internal geniculate body, probably are not part of the visual system.
5. The cortex of the calcarine fissure may contain nearly the normal number of cell bodies even though the visual system may be undeveloped.
6. The nerves of the ocular muscles and their nuclei may be developed even though the visual system is absent.
7. Congenital spastic paraplegia may be the result of deficient formation as regards number or size of the neurons of the central motor system, even though such a deficiency may be difficult to detect by the microscope.

*A Case of Abscess of the Spinal Cord Associated with Retro-Bulbar Neuritis. (Ein Fall von Abscess des Rückenmarks nebst Retro-bulbarer Neuritis.)*

SILVAST. *Deutsche Zeitschrift für Nervenheilkunde*, Bd. XXX., Hft. 2, p. 102.

Owing to the comparative rarity of abscess of the spinal cord, the following case is of considerable interest. In the course of but a few days



there developed in a perfectly healthy man, a complete blindness in both eyes, with at the same time fearful pain in the region of both frontal bones and about both eyes. The ophthalmoscope showed nothing abnormal. Two weeks after there occurred suddenly paresis of the left leg; this was followed two days later by paralysis of the Brown-Sequard type, consisting of paralysis of the left leg, with exaggerated tendon reflexes, hyperæsthesia, and paralysis of sensation of the right leg. Two months afterward there developed complete paraplegia with absent tendon reflexes, complete anæsthesia of the lower half of the body and paresis of the upper extremities. The author believes that the symptoms of this case give a clinical picture of acute origin interrupting the conducting paths of the spinal cord, at first of the left side and then rather rapidly involving the greater part of the transverse section, extending upward to the middle of the cervical enlargement, and he believes the symptoms are due to an intra-medullary abscess, this conclusion being reached from a careful survey of the above-mentioned clinical facts. The author's diagnosis was fully verified by the section, there being found an abscess in the central part of the spinal cord extending from the fourth cervical segment to the upper dorsal, causing a destruction of the tissues of the medulla spinalis. The probable source of the pus was a small abscess, the size of a cherry in the upper lobe of the right lung.

## RHINOLOGY, LARYNGOLOGY AND OTOTOLOGY

Edited by C. F. Theisen, M. D.

*A Contribution to the Study of the Malignant Tumors of the Nasal Accessory Sinuses. (Ein Beitrag zur Lehre von den bösartigen Geschwülsten der Nebenhöhlen der Nase.)*

*Fraenkel's Archiv. Bd. IV, Heft 3.*

Ten cases were reported of which the following are brief abstracts: (1) Epithelioma of the maxillary antrum, complicated by empyema of the antrum and frontal sinus. The operation consisted of a partial resection of the superior maxilla. There was a rapid recurrence. (2) Spindle-celled sarcoma originating in the anterior portion of the ethmoid. The tumor was removed by an intra-nasal operation. No recurrence after six months. (3) Round-celled sarcoma probably starting from the ethmoid. There was also an empyema of the ethmoid cells, and an involvement of the orbital cavities. Psychical disturbances were also present. An incomplete operation was performed, which was followed by the death of the patient. Both frontal lobes were found to be involved. (4) Carcinoma of the antrum of Highmore complicated by empyema. An operation for the resection of the superior maxilla was performed. Patient made a good recovery, but there was a rapid recurrence. (5) Hard papilloma originating in the anterior ethmoid cells. There was also empyema of the frontal sinus. The tumor was removed by an intra-nasal operation. (6) Carcinoma starting from the posterior ethmoid cells. Eye symptoms, with protrusio bulbi and double vision, developed early. Patient also

had nasal hemorrhages. An intra-nasal operation for the removal of the growth was performed. (7) Fibro-sarcoma of the anterior ethmoid region with empyema of the right maxillary antrum. Repeated intra-nasal operations were performed, and finally the nose was split open, but it was found to be impossible to perform a radical operation. Death from meningitis. (8) Small, round-celled sarcoma, originating in the ethmoid region. Patient had nasal hemorrhages at first. An intra-nasal operation was performed, but was followed by recurrence, with protrusio bulbi. The growth was then removed by laying down the nose. Patient was discharged, temporarily cured. (9) A case of carcinoma of the antral region is also reported in which the first symptom was otalgia. The tumor had been slowly growing for nine months. (10) Soft papilloma starting from the nasal roof including the perpendicular plate of the ethmoid. An intra-nasal operation was performed, and there was no recurrence for months.

In summing up his cases, the author mentions the following symptoms characteristic of all malignant nasal growths:

The tendency to breaking down, which often leads to suppuration in the accessory cavities; the rapid extension of the tumors, which is shown by the involvement of the bony framework; the hemorrhages, which are particularly characteristic of sarcomas, and the pain, which is usually neuralgic in character.

*A Contribution to the Pathological Anatomy of the Tonsils. (Ein Beitrag zur pathologischen Anatomie der Gaumenmandeln.)*

RITTER. *Fränkel's Archiv*, Band XIII, Heft 1, 1902.

The author was led to make his investigations by Funder's work in regard to tonsillar abscesses situated superficially under the epithelium. In making his examinations it was considered of importance to obtain the entire tonsil, and not simply the portion that is usually removed with the tonsillotome. Tonsillotomy, because of the elasticity of the tissues, changes to a certain extent the anatomical relations, and the examination of simply a part does not give the correct anatomical picture of the entire tonsil.

The examinations made by the author were in regard to intra-tonsillar abscesses, which he claims should really be considered retention cysts. The specimens were obtained post-mortem, the entire tonsil with its connective tissue capsule being removed. In making the examinations, particular importance was attached to the fact whether true abscesses lined with pyogenic connective tissue membranes occurred in the upper part of the tonsil, or deep in the perenchymatous tissue. In the large amount of material examined, he was not able to find a single true abscess within the tonsillar capsule, but only the cysts, which have been also described by Funder. In order to obtain an exact anatomical picture of the position of these cysts, the tonsil, which was always entirely taken out, was hardened and embedded in celloidin before any study was made of its pathological conditions.

These were examined, into when the tonsil was cut with the microtome, with particular reference as to whether cysts which had been cut through communicated in any way with the surface of the tonsil. It was found that those cysts, in which a communication with the surface could not be discovered, practically without exception were bullet shaped, while those in which a communication could be established, and which should be regarded as merely follicles, differed very much in shape. These cysts were found in all parts of the tonsil, right under the surface epithelium and deeply in. The impression was given that deep in the tonsil they have an extremely slow growth, and cause only a slight inflammatory reaction of the surrounding tissues. When, however, they have broken through the connective tissue capsule posteriorly, and have poured out their infectious contents in the meshes of the retro-tonsillar tissue, they give rise to the excessively stormy outbreaks of peritonsillar abscess.

*The Extraction of Swallowed Foreign Bodies from the Pharynx and Oesophagus. (Zur Extraction verschluckter Fremdkörper aus Pharynx und Oesophagus.)*

TRZEBICKY. *Wiener medicinische Wochenschrift*, April 5, 1902.

The lodging of a foreign body in the pharynx or œsophagus involves a whole series of dangers to the patient. These depend largely on the physical properties of the foreign body, mainly its shape or whether it is sharp pointed and of irregular surface.

If a sharp pointed foreign body can not be removed soon after it is swallowed, then there is danger of a perforation of the œsophagus resulting from decubitus ulceration, with all its attending dangers. *i. e.*, deep septic phlegmons of the neck extending down towards the mediastinum and often causing severe attacks of dyspnoea, purulent pleurisies, and pneumonias, perforation through the trachea, and hemorrhages from large arteries and veins, the result of erosions.

The danger of perforation is frequently hastened by the attending physician in his efforts to remove the foreign body with certain instruments commonly used for such purposes. One of the most dangerous instruments of this kind is Græfe's basket, called by the Germans "Münzenfänger," or coin catcher. Among the dangers that attend the use of this instrument are the following: V. Langenbeck in attempting to remove a needle from the œsophagus, could not get the instrument out after passing it into the œsophagus. It was finally extracted on the third day.

A similar accident happened to Schmidt, but in his case an œsophagotomy had to be performed in order to remove the instrument, which had become impacted in the œsophagus.

In attempting to remove foreign bodies with very sharp points that have become impacted in the œsophagus, there is great danger that when traction with an instrument is applied, the œsophagus might be split, just as if a knife had been used.

The following case illustrates the dangers mentioned above: A

woman, aged 53 years, while eating meat noticed that a hard substance had remained sticking in the throat. On the following day she visited the clinic of Prof. Pieniazek complaining of severe pain in the throat. Pieniazek was able to remove the foreign body, which was found to be a sharp piece of bone three centimetres long, with the *münzenfänger* without any difficulty. During the extraction of the bone the patient did not complain of any pain nor was there any bleeding.

Four days afterwards patient again came to the clinic, and as her condition was found to be very serious, she was referred to the surgical department. She was found by the author to be in a septic condition, with high temperature, and a pulse that could be hardly detected. The neck in the region of the thyroid was much swollen. A diagnosis of perforation of the pharynx and œsophagus with a resulting phlegmon of the neck was made, and an immediate operation performed. The patient died the tenth day after the operation. The autopsy disclosed an infiltration of the retro-œsophageal and pre-vertebral connective tissue in the mediastinum, and a fibro-purulent deposit on the lateral walls of the œsophagus, which was directly continuous to the pericardium.

There was pus in both pleural cavities. The œsophagus was found to be split and in the region of the cricoid several perforations were discerned.

These were undoubtedly produced when the bone was removed.

### ORTHOPEDIC SURGERY

Edited by Arthur W. Elting, M. D.

*Further Experiences with Silk Tendons. (Weitere Erfahrungen über seidene Sehnen.*

FRITZ LANGE. *Muenchener medicinische Wochenschrift*, No. 1, 1902.

The writer briefly calls attention to the so-called periosteal method of transplanting tendons devised by himself. According to this method the transplanted tendons are attached directly to the periosteum instead of to the paralysed tendons.

He also refers to an earlier publication of his own upon the subject of "silk tendons," in which he used silk threads to attach the transplanted semimembranosis and semitendinosus muscles to the periosteum of the tibia. In these cases the tendons transplanted were too short to be attached directly to the periosteum and this space was bridged over by means of silk sutures passed subcutaneously. The results were so satisfactory that he was led to use the device for the transplantation of all tendons which were too short to be attached to the desired point.

In certain other cases he has simply passed several silk threads subcutaneously from a healthy tendon to the periosteum where he wished to transfer a part of the muscular action and has found that around these threads a tendinous structure develops which functions as well as a tendon and which in some instances is as thick as a lead pencil. Thus, one is enabled to transfer a part of the action of a muscle without weakening its tendon. In certain cases the distance bridged over by the silk threads has been as much as 20 centimetres. The writer has used the "silk tendons"



in 56 cases, and in only 2 of these did the silk fail to remain in place, and none of the wounds suppurated. He has also used the device to transfer a portion of the muscular action of the calf muscles to the dorsum of the foot.

In the course of an operation two and one-half years after the introduction of the silk threads the writer had an opportunity to study a "silk tendon" which was about the thickness of a lead pencil. It was surrounded by a layer of rather loose, connective tissue, but there was no definite tendon sheath. A small portion of the tendon was excised and at its center the silk threads were found in practically the same condition as when first introduced. These threads were surrounded by a zone  $\frac{2}{3}$  millimetres in thickness, which resembled normal tendon and which histologically was found to be pure tendon.

*Multiply Heredity Exostoses. (Über multiple hereditäre Exostosen.)*  
JUNGMANN. *Berliner klinische Wochenschrift*, September 22, 1902.

The writer reports an interesting series of cases of this disorder observed in a single family. The individuals afflicted were a grandfather and aunt on the father's side, the father and two children aged 9 and 6 years. The child aged 9 years presented the most marked condition of exostosis which involved the ribs, the long bones and certain of the short bones of the hands and feet. The child was also decidedly underdeveloped and presented a varus deformity of the left elbow, a valgus deformity of the left hand, a valgus deformity of the left knee and of the left foot. The father and other child were decidedly less deformed and presented only a few exostoses, although they were both somewhat underdeveloped.

The situation of the tumors tended to be symmetrical. The condition is undoubtedly an hereditary one, but not congenital, the tumors usually not developing much before the third or fourth year. The onset is insidious, the development slow and as a rule they cause but little pain or discomfort, except as a result of pressure upon or irritation of the adjacent soft parts. Hartmann has been able to demonstrate that certain of the exostoses may also undergo absorption and may thus almost completely disappear. In other instances the exostoses may become separated from the bone and present as more or less movable tumors. Certain observers have been inclined to assume that the affection was due to rachitis, mainly because of the age at which it usually develops, but in none of the cases reported by this writer were there any evidences of rachitis.

Bessel-Hagen and Helferich have demonstrated, however, that this affection is a disease *sui generis* due to the disturbance in growth of the intermediary cartilage resulting from faulty embryonal development. The disturbance of growth of the bones is a characteristic of the disease and affects mainly those bones which present the greatest number of exostoses. This disturbance of growth is most manifest in the long bones as a result of which the trunk of the individual appears to be relatively too long for the legs. Examination of the writer's cases with the X-ray showed a delayed ossification and a tardiness in the appearance of the epiphyseal centres.

# ALBANY MEDICAL ANNALS

## Original Communications

### RECENT STUDIES REGARDING THE MORPHOLOGY OF THE DIPHTHERIA BACILLUS.

*Read before the Medical Society of the County of Albany, March 18, 1903.*

By ARTHUR T. LAIRD, M.D.

From the Bender Hygienic Laboratory, Albany, N. Y.

The morphology of the diphtheria bacillus is a subject which concerns every physician. The organism has been proven to be the cause of diphtheria. By a study of cultures from the throat, and the recognition of the diphtheria bacillus by its morphological characteristics, the diagnosis is often aided, and quarantine is imposed and regulated by Boards of Health in accordance with these cultural findings.

Diphtheria may be considered as the reaction of the body to the toxins produced by the diphtheria bacillus. This reaction is not necessarily along fixed clinical lines. All gradations of systemic poisoning may be recognized. The anatomical conditions produced also vary. The relation of the various common types of sore throat to each other under the older and newer conceptions of the disease has been well shown by Hill<sup>1</sup>.

#### *Older Anatomical Classification.*

Membrane=Diphtheria

Exudate=Follicular tonsillitis.

No membrane or exudate=Simple sore throat.

#### *Classification on Basis of Cause.*

Membrane due to diphtheria bacillus toxins=Diphtheria.

Membrane not due to diphtheria bacillus toxins=Not diphtheria.

Exudate due to diphtheria bacillus toxins=Diphtheria.

Exudate not due to diphtheria bacillus toxins=Not diphtheria.

Simple sore throat due to diphtheria bacillus toxins=Diphtheria.

Simple sore throat not due to diphtheria bacillus toxins=Not diphtheria.

The bacillus may be present without forming toxins. The toxins may be produced and neutralized by body forces. The

presence of the bacillus in cultures is not an absolute indicator of the activity of the toxins, but in the majority of cases if the bacillus is present it is producing toxins, and any symptoms the patient may have are due to the toxins.

The diphtheria bacillus is one of the few organisms which can be diagnosed from its morphological and staining properties alone. It has also definite cultural characteristics, and its virulence may be determined approximately by guinea-pig tests, but these methods of diagnosing diphtheria take too much time to be available for routine clinical work. The most striking peculiarities of the organism consist in certain variations of its form and staining properties.

Wesbrook<sup>2</sup>, director of the Bacteriological Laboratory of the Minnesota State Board of Health, has been a leader in the study of the different forms of the diphtheria bacillus, and has suggested a convenient, though arbitrary method, of classification. He divides diphtheria bacilli into three main groups, subdivided into types. The groups (see plate) are I. Granular; II. Barred; III. Solid-Color Forms.

I. Granular forms contain distinct spherical, ovoid, or markedly rounded granules, which usually show metachromatism, that is they take a reddish tint with methylene blue. II. Barred forms show a distinct barred appearance, the number of subdivisions varying; usually they number from three to nine. III. Solid or evenly staining forms take a uniform tint with methylene blue. The subdivisions depending on shape and size are represented by the letters A to G. A, represents bizarre, irregularly-shaped, granular forms, the so-called involution forms. A<sup>1</sup> irregularly shaped barred forms, and A<sup>2</sup> solid color forms, having the same characteristics as A and A<sup>1</sup> in regard to outline and size. Type C is more uniform in dimensions, and is the common long form of diphtheria bacillus usually met with in clinical cases. D and E are similar but shorter. C<sup>1</sup>, D<sup>1</sup> and E<sup>1</sup> resemble the organisms usually described as Xerosis bacilli. D<sup>2</sup>, the so-called "atypical" form, resembles the organism called the pseudo-diphtheria bacillus. It is occasionally the only form present in clinical cases and according to Wesbrook is frequently pathogenic for guinea-pigs. A few of the more common of the above types are represented in the plate.

An analysis<sup>3</sup> was made of the distribution of types of bacillus diphtheria in 608 cases in which a diagnosis of

To Illustrate Dr. Laird's Paper on "Recent Studies Regarding the Maphology of  
the Diphtheria Bacillus."

*Allany Medical Annals, May, 1903.*



THE MORE IMPORTANT TYPES OF DIPHTHERIA BACILLI ACCORDING TO WESBROOK'S  
CLASSIFICATION.

(From Gorham, through the courtesy of the *Journal of Medical Research*.)





"Diphtheria" was made in the Minnesota State Laboratory during the fourteen months ending December 31, 1900. Type A was found in one per cent. of cases, D or C in eighty-nine per cent., E in two per cent., C<sup>1</sup>, D<sup>1</sup> in three per cent., D<sup>2</sup>, E<sup>2</sup> in five per cent. Among others, the following conclusions are drawn by Wesbrook. Type D appears to be the most important from a diagnostic standpoint. Type C is most frequently combined with type C<sup>1</sup>. D<sup>2</sup> and E<sup>2</sup> are sometimes the sole diphtheria-like bacilli present in clinical cases, and should be considered sufficient evidence for isolating the patient. From a study of a series of clinical cases (2) the conclusion is drawn that (a) granular types are usually the predominant forms at the outset of the disease (b) the granular type usually gives place wholly, or in part, to the barred and solid types shortly before the disappearance of the diphtheria-like organism. On the other hand solid types may occasionally be replaced by granular types.

Gorham<sup>4</sup>, of Providence, in the examination of 2375 cultures, about 1000 of them from healthy subjects, verifies Wesbrook's observations and concludes: (1) That diphtheria-like bacilli are more frequent in the nose than in the throat. (2) That there are diphtheria-like bacilli in the noses and throats of a large percentage of apparently healthy people. (3) That many morphological varieties of the *B. diphtheriae* may be recognized. (4) That the change from granular or barred types to solid staining types seems to take place under the influence of the body fluids of a person immune or becoming so. (5) That the virulence of the *B. diphtheriae* seems to be correlated with its microscopic form. (6) That the so-called Xerosis, Pseudo-diphtheria or Hofman's bacilli are morphological varieties of the *B. diphtheria*, sometimes capable of producing clinical diphtheria, but usually non-pathogenic to guinea-pigs. (7) That it is probable that the solid staining types may regain their virulence when they have once lost it.

The relationship of virulent diphtheria bacilli to non-virulent diphtheria-like bacilli has been discussed since Löffler in 1887, and von Hofman-Wellenhof in 1888 published descriptions of the pseudo-diphtheria bacillus. Dr. Anna W. Williams<sup>5</sup> sums up in tabulated form the results of numerous studies by various observers on this subject. Diphtheria-like bacilli have been found in a great variety

of pathological conditions, apparently having no relation to clinical diphtheria. Some of these organisms have been said to be characterized by certain cultural and morphological peculiarities different from those of the diphtheria bacillus and to constitute a distinct species. Park and Beebe<sup>6</sup> limited the name pseudo-diphtheria bacillus to such organisms, excluding bacilli which differ from typical diphtheria bacilli only in being non-virulent. These they considered diphtheria bacilli which had lost their virulence. Trump<sup>7</sup>, in 1896, and Richmond & Salter<sup>8</sup>, in 1898-1899, state that they have converted typical pseudo-diphtheria bacilli into typical diphtheria bacilli, specifically virulent for guinea-pigs by passage through guinea-pigs and goldfinches. Bergey<sup>9</sup> and others have not succeeded in giving virulence to non-virulent forms. Dr. Williams<sup>5</sup>, as a result of studies in New York city, at the Willard Parker Hospital for contagious diseases, and elsewhere, believes that there are distinct species and sub-varieties of diphtheria-like bacilli which have no tendency to become converted one into the other. As many non-virulent diphtheria organisms retain their characteristics under various artificial and natural conditions she thinks that they may be regarded from a public health standpoint as harmless. She also concludes that the morphologically typical diphtheria bacillus is a distinct species from the atypical diphtheria-like bacilli and so-called pseudo-forms. Morphologically the organisms described as pseudo-diphtheria bacilli have resembled the solid color types of *B. diphtheriae* in Wesbrook's scheme, especially D<sup>2</sup>. The so-called Xerosis bacilli resemble the barred forms.

In this connection the recent studies of Hill and Rickards<sup>10 11</sup> regarding the mode of fission and reproduction of various organisms are of especial interest. Hill devised a method for the examination of living bacteria, substituting for the ordinary hanging drop a cube of solidified agar, on the surface of which the bacteria are sown. The inoculated surface of this cube is applied to the under surface of a cover-slip and examined under the microscope. Expedients are used to keep the preparation at a constant temperature. By means of this "hanging block" method it was found that a striking difference exists between diphtheria-like bacilli and a very large group of bacilli distinct from the diphtheroid group, in the movements taking place after fission.

What is usually observed in the bacilli of the diphtheroid group, including the diphtheria, pseudo-diphtheria and Xerosis bacilli is a gradual enlargement of the bacterial cell in both diameters, then a sudden snapping across of the rod, resulting in two portions lying at an angle with each other. Subsequently the gradual approximation of the distal ends of these rods results in a parallel arrangement, the so-called cord wood, palisade, or battalion arrangement. Both the angular and parallel grouping have long been observed in diphtheria cultures. In many bacilli, of which the typhoid bacillus may be considered the type, the post-fission movements take place in a manner quite different from that just described. After a sharp division without snapping, the proximal ends of the new bacilli slip past each other and gradually reach to the distal ends. In this form of division the proximal end of each of the new bacilli comes to be near the distal end of the other, while in the diphtheroid group the proximal ends remain close together. Hill believes that the snapping post fission movements sharply distinguish *B. diphtheria*, *B. pseudo-diphtheria* and *B. Xerosis* from other bacilli of which the typhoid bacillus is typical, including the *B. Coli*, *B. Pestis*, *B. Pyocyaneus*, *B. Anthrax*, *Spirillum Cholerae Asiaticae*, in all of which "slipping," rather than "snapping," movements were observed.

Denny<sup>12</sup>, of Brookline, Mass., has studied cultures of *B. diphtheria*, *B. pseudo-diphtheria* and *B. Xerosis*, beginning to observe them within a few hours of the inoculation before visible growth appeared, and repeating the examination of the same culture at intervals. He found that in young cultures up to eight to twelve hours, the development of the diphtheria bacillus consists in elongation and fission. The bacilli stain evenly ( $C^2 D^2$ ). After this fission ceases and changes take place in the individual organisms; granules develop, the rods elongate, the protoplasms breaks up into segments (bars), and branching may occur, all of which changes are characteristic of the higher bacteria, and especially of the streptothrix. If grown at room temperature the changes are retarded, the solid color stage lasts longer and granules do not appear until after forty-eight hours. A temperature of forty degrees C. also delays the appearance of the granules. Marked acidity or alkalinity of the serum prolongs the solid staining stage. If many staphylococci are



grown with the diphtheria bacilli, the appearance of the granules is delayed.

The bacillus pseudo-diphtheria Denny found to be in all stages like the young forms of *B. diphtheria*. It has no stage of development when it grows out into long forms like the higher bacteria. The bacilli were even shorter in old than in young cultures. *Bacillus Xerosis*: In young cultures the forms were like young diphtheria bacilli; older cultures became barred, only rarely did granules appear.

Hill<sup>10 13 14</sup> has studied cultures of the diphtheria bacilli in which branching occurs, both in stained specimens and by means of the "hanging block." He believes that branching may take place as a part of the active development of the diphtheria bacillus. Branching forms occur only in occasional cultures. They have been noted in several cultures\* received at the Bender Laboratory during the past year. It is probable that if a definite search for branching forms were carried out in every positive culture received in the laboratory they would be found in a larger percentage of cases. Wilson<sup>15</sup> found them more abundant in Boston than in Minnesota. The advisability of giving the name streptothrix or mycobacterium to the diphtheria organism, or of placing branched bacteria in a class distinct from forms not yet known as branching seems to Hill to be questionable.

The studies of Hill and Denny seem to them to show that the so-called pseudo-diphtheria bacilli cannot be distinguished morphologically from young diphtheria bacilli, and it is probable that they are very closely related species.

A committee of the Massachusetts Association of Boards of Health has endeavored to collect data regarding the occurrence of diphtheria bacilli in well persons. The co-operation of leading bacteriologists, both within and without the State, was secured. A report was given at the April quarterly meeting, 1902<sup>15</sup>.

Wesbrook's plates were furnished to all the workers. Cultures were taken from both the nose and the throat, amounting to over 4000 in number. It was found that between one and two per cent. of persons examined in the east were infected with typical diphtheria bacilli of the granular types A, C and D. Solid color types were found in about twenty-six per cent. of cases in the nose, and in about five per cent. of cases in the throat. The results in

Minnesota of cultures taken almost altogether from children in institutions where diphtheria had existed from one to eighteen months previously, showed a higher degree of prevalence of all the forms.

The committee believes that in healthy persons only the granular types A, C and D should be considered as diphtheria bacilli. Forty-seven tests of the virulence of granular forms found in throats of healthy people were made. Only about seventeen per cent. proved to be virulent.

The committee concludes: I. It is impracticable to isolate well persons infected with diphtheria bacilli if such persons have not so far as known been recently exposed to the disease. II. It is not advisable as a matter of routine to isolate from the public *all* the well persons in infected families, schools and institutions, cultures from whom show the presence of the diphtheria bacillus.

The committee believes that the danger from an infected healthy person depends on the age, habits, surroundings, occupation and intelligence of the individual, and all of these matters should be taken into consideration by the health authorities.

Dr. Wesbrook modifies his assent to conclusion II as follows: It may sometimes be impracticable to isolate from the public all the well persons in infected families, schools and institutions, though it should be done as a routine if at all possible.

From July, 1901, to date, the various types of diphtheria bacilli observed in positive cultures received at the Bender Laboratory have been noted according to Wesbrook's scheme. The cultures were examined for the Albany and Schenectady Boards of Health, and for the State Department of Health. The following table shows the relative frequency of occurrence of the granular, barred and solid color groups in cultures received for diagnosis and for release from quarantine. Under the heading "Granular" are grouped all cultures which showed the presence of granules in the bacilli. Many of these cultures contained also barred and solid color forms. The "barred" forms noted were found in cultures containing either barred forms alone (these cultures were comparatively few in number), or barred and solid color forms. Solid color forms only were found in cultures recorded under that heading.

Table showing cultures received from Albany, Schenectady and various parts of the State of New York, classified according to types found:

1901	ALBANY						SCHENECTADY						TOTAL
	DIAGNOSIS			RELEASE			DIAGNOSIS			RELEASE			
	Granular	Barred	Solid	Granular	Barred	Solid	Granular	Barred	Solid	Granular	Barred	Solid	
July .....	4	1	1	2	3	7	2	2	1				23
August.....	8	4	7	9	1		3		2				34
September..	10		3	3		3	7		1				27
October....	18	6	9	17	3	9	18	1	7	2			90
November..	45	1	11	31	1	29	23		7				148
December..	22	2	7	17	3	20	17		8				96
1902													
January....	16	3	7	18	3	18	8	1	2				76
February...	8	3	6	3	2	10	20	5	5				62
March.....	4	2	3	5	1	16	13	1	13				58
April.....	8	1	11	4	1	7	6	2	12				52
May.....	12	5	5	7	3	4	26	1	4	3		2	72
June.....	11	2	2	5		8	12		4	4	1	7	56
July.....	4	3	5	4		13	5	1	7	2	1	17	62
August....	4		7	1		6	16		3	1		7	45
September..	10	4	12			3	13	1	5	2		13	63
October....	16	5	12	4		17	15	2	20	5		21	117
November..	11	5	18	10	4	25	15	4	13	16	3	23	147
December..	3	1	5	3		16	15	4	27	2	5	48	129
1903													
January....	2	4	7	1	1	5	3	2	20	7	2	24	78
February..	1	3	6	2	1	6	8	7	7	8		27	76
Total ....	217	55	144	146	27	222	245	34	168	52	12	189	1511
State Dept. of Health..	47	6	43	20	3	36							155
Total ....	264	61	187	166	30	258	245	34	168	52	12	189	1666

	TOTALS			
	Granular	Barred	Solid	Total
Cultures for diagnosis. ....	509	95	355	959
Cultures for release.....	218	42	447	707
	727	137	802	1666

	PERCENTAGES					
	CULTURES FOR DIAGNOSIS			CULTURES FOR RELEASE		
	Granular	Barred	Solid	Granular	Barred	Solid
Albany .....	52	13	35	37	7	56
Schenectady .....	55	7	38	20	5	75
State.....	49	6	45	34	5	61
All cases.....	53	10	37	31	6	63

It will be seen that granular forms were found in more than half of the cases diagnosed as diphtheria. It will also be noted that in cultures for release from quarantine, solid color forms alone were found in a much larger proportion of cases than in cultures for diagnosis. This confirms the observations of Wesbrook<sup>3</sup> and Gorham<sup>4</sup>, that in the later stages of the disease the granular types are frequently replaced by solid color types. The release cultures include those taken from a day or two after the diagnosis up to the time that a culture free from the bacilli was obtained. It is possible that if only cultures taken just before release were included a larger proportion of solid color forms would have been obtained. On the other hand in individual cases we have found granular types persisting up to the final culture.

Of the types noted C and D have been the most common among the granular forms, and C<sup>2</sup> and D<sup>2</sup> among the solid forms. Nearly all of the types have been seen.

The solid types have been found to be the only ones present in a considerable number of the clinical cases of diphtheria. This is thought by the committee of the Massachusetts Board of Health<sup>15</sup> to be a very rare condition, but Wesbrook<sup>3</sup> and Gorham<sup>4</sup> have both found them present alone in cases of clinical diphtheria, and have several times isolated solid forms in pure cultures from healthy persons, and proved them virulent to guinea-pigs.

Since the appearance of granules may, according to Denny<sup>12</sup>, be delayed by several factors, temperature above forty degrees, marked alkalinity or acidity of serum, symbiosis with staphylococci, short incubation, etc., it is possible that some cultures classified under the solid color heading would have later shown granular forms. Two cultures showing solid color types only were laid aside for a day or two, and when examined again showed granular forms.

No constant difference was noted between the types found in cultures from Albany and Schenectady, or between types in cultures from different parts of the State.

Amyot, of Ontario<sup>15</sup>, states that the types vary with the locality to some extent, since in studying clinical cases bacteriologically he was able to distinguish between two specific localities by the types present.

Gorham<sup>15</sup> found that the types present in Providence in



clinical diphtheria ran considerably smaller than those in Boston.

The table shows also the marked increase in the number of cases of diphtheria occurring after the opening of the schools.

The location of cases occurring in different school districts in Albany is now marked on a map kept at the laboratory.

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14. HILL, H. W. Branching in Bacteria with Special Reference to B. Diphtheriae. *Journal of Medical Research*, January, 1902.
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## CHRONIC HYDROCEPHALUS WITH REPORT OF A CASE ASSOCIATED WITH GIGANTISM.

*Read Before the Medical Society of the County of Albany,  
March 28, 1903.*

By GEORGE G. LEMPE, M. D.

*Mr. President, Gentlemen:*

In presenting this paper to you, it was not my intention to enter so fully into the subject of chronic hydrocephalus, but I found it was necessary to do so, to a certain extent, in

order to render a thorough understanding of this case, which may present some features of interest to you, possible.

Chronic hydrocephalus, i. e., the internal variety means, as we know, a progressive accumulation of serous fluid within the ventricles of the brain; the cases in which fluid has been found *outside* of the brain, i. e., external hydrocephalus, or the so-called extra-ventricular form of this disease are, in the majority of instances secondary, or altogether accidental conditions depending on meningeal hemorrhage or pachymeningitis, or occurring as compensating lesions in cerebral atrophy or in congenital cerebral malformations.

According to the latest statistics, chronic hydrocephalus begins at birth or within the first six months of life, as in eighty per cent. of cases; sometimes it occurs before end of the first or second year; rarely in adolescence; still more rarely in adult life (of which Dean Swift's case is a well-known instance).

Three different states, in regard to the size of the head, have been described as existing in this affection. 1. Where the head is smaller than natural; 2. Where the head is natural in size; 3. Where the head is abnormally enlarged.

1. The *first* are cases of microcephalism, still classed erroneously, by some authors, under chronic hydrocephalus; erroneously, inasmuch as the fluid found is simply compensatory to the atrophied brain. 2. The *second*, where the head is natural in size, cannot with any positiveness be recognized as chronic hydrocephalus during life; under this head we may class the idiopathic hydrocephalus of adult life, and the cases where complete bony union of the cranium has taken place before chronic hydrocephalus was developed. 3. The *third* state, abnormal and typical hydrocephalic enlargement of the head is the one most commonly met with; in fact, we need this objective sign to arrive at a positive diagnosis, as pressure symptoms alone do not form a sufficiently precise combination to enable us to do more than have a suspicion of chronic hydrocephalus. The enlargement of head may be globular, pyramidal or cone-shaped, the latter mostly found in adults, where primary hydrocephalus was arrested.

*Etiology:* The predisposing causes of chronic hydrocephalus are lead poisoning, tuberculosis, alcoholism, syphilis in the parents, and rachitis. Extreme overwork and worry in the mother has been claimed to be a factor in determining

the occurrence of *primary* hydrocephalus. In cases occurring in late childhood or adult life, it is due, generally, to meningitis or other organic diseases, such as a tumor obstructing the Venae Galenae or Sylvian Aqueduct. *Secondary* chronic hydrocephalus has been attributed causatively to an attack of tubercular meningitis, although this is denied by some authorities. Another cause of *secondary* chronic hydrocephalus has been mentioned in several reports, to be complete closure of the cerebro-spinal opening by a fibrous membrane, caused by inflammation or tumor.

*Pathology:* The lesions found post-mortem are enormously enlarged ventricles, and flattened convolutions. The lining membrane of the ventricles is much thickened and tougher than natural; it may be more or less granular on the surface and may show an increase of distended vessels. The latter conditions are not necessarily an indication of an inflammatory origin; they may be due to a mere mechanical congestion, such as is produced by the pressure of a tumor in the middle lobe of cerebellum. The porta are distended. The brain rarely shows signs of atrophy, rather the reverse. The brain of an hydrocephalic child weighs more, as a rule, than that of a child of the same age in good health. The fluid has the same chemical composition as physiological cerebro-spinal fluid. Often no line of demarcation between white and gray matter is left, and under the microscope a marked degeneration of nerve elements is observed.

*Symptoms:* The disease may be ushered in by fretfulness and irritability, or the head may slowly enlarge, often without further symptoms. Chronic hydrocephalus has been known to occur after a fall. In cases associated with tumors, we are apt to have vomiting, obstinate and paroxysmal in character, and continuous head-ache marked with exacerbations. Convulsions and paralysis of one or more ocular muscles, also optic neuritis, often with resulting atrophy, may occur. Loss of memory, dullness, great tendency to sleep, weakness, paralysis of limbs, blindness—*rarely* deafness—loss of smell and impairment of other senses may all occur. The appetite is *good* as a rule.

*Diagnosis:* No error is liable to occur in marked cases, but, when effusion is moderate, and ossification has taken place before its establishment, the diagnosis is rather difficult.

Cases of chronic *external* hydrocephalus are of rare occurrence and may, as a rule, be differentiated by careful examination and observation.

*Prognosis:* Within two or three years from the onset of the disease, vomiting, coma and convulsions appear, and death ensues from exhaustion, although some few cases have been known to recover.

*Treatment:* Internal treatment, as we all know, is of little benefit, as a rule. Iodide of potash, where not especially contra-indicated, has proved to be of undoubted value. Strapping with adhesive straps, although fallen into disuse for a time, has again been employed in some cases with doubtful results. Tapping of the lateral ventricles through the anterior fontanelle gives but temporary relief. If done sufficiently early though and repeated at intervals, with subsequent strapping, a certain amount of success may be expected. Of four cases, in which I employed this method, two died; L. S., age one and one-half years; O. F., age two years; one, J. B., is living, thirteen years old and virtually helpless, with a head enormously enlarged (operation performed ten years ago); the other, F. M., operated on nine years ago, is nineteen years old, very intelligent and to all appearances, well. One of the cases which died, O. F., was an external hydrocephalus, due to atrophy of the brain and the operation was only palliative.

Puncture between the third and fourth lumbar vertebræ has been productive of good results, and is indicated where a previously healthy child rapidly develops distinct symptoms of chronic hydrocephalus with consequent bodily and mental impairment. Where relief from intense head-aches, clonic convulsions, strabismus, etc., is necessary and a cure seems probable, paracentesis should be tried.

Incision with drainage has not proven very successful thus far, although in 1902, Montini reported the case of a child four years of age, where drainage was instituted for seven days, the child recovering from convulsions and pain and only slight strabismus remaining. The child was apparently well one year later. Trephining with tapping has been employed in several cases with but indifferent results. If in any given case we could be reasonably certain that it belonged to the idiopathic variety, and was not due to a complete



closure of the cerebro-spinal opening, we might operate, in my opinion, with a greater chance of success. Still, *all* cases of chronic hydrocephalus are so grave that the question of an operation should always be *entertained*, where the sutures being open and the patient rapidly growing worse, *death* seems otherwise *imminent*.

The following case presents certain features not usual in connection with chronic hydrocephalus:

H. L., age eighteen years: Parents, one brother and four sisters, always in good health and normal in size; average height of family five feet, six inches. I knew the patient several years before he was taken ill. The patient has never been sick, except as child, with measles. He was the youngest of six children.

In 1894, while attending his mother, my attention was drawn to him by his mother, who informed me that the boy, then ten years of age, had complained for some time, off and on, of severe headaches, frontal and occipital in character, especially when he was returning home from school in the afternoon. The headache continued with exacerbations, especially after studying. The boy was very intelligent and a good scholar. Counter irritation at the back of the neck and systemic treatment were instituted. About one year after I first saw him, the headaches having continued at intervals, his mother brought patient to my office. Meanwhile the late Dr. Van Allen having examined his eyes at my request, had found an optic neuritis. At this time an ataxic gait was evident; the patient walked in a reeling, drunken manner, with short steps and his feet wide apart; ataxia of the upper limbs was apparent; the headache and vertigo had increased and there was projectile vomiting. Strabismus and dilatation of pupils were noticed. The superficial reflexes were good. The temperature was variable. A diagnosis was made at this time of tumor in or near the cerebellum. Iodide of potash was given. The patient continued to grow worse; he had trouble in swallowing; loss of sight and speech were now almost complete and control of the sphincters was absent. There was complete paralysis of the body and limbs, stupor and a comatose condition. He remained this way with slight ameliorations for about one week and then his body commenced to swell in its entirety. The swelling suddenly left him after

lasting four or five days. Then he commenced to improve gradually. Iodide of potash was again given in large, progressive doses, as much as sixty to seventy drops of a saturated solution being given three times a day for five or six months. Sight, speech and locomotion remained very poor for some time; the patient was obliged to occupy a recumbent or sitting position for almost one year. Then he improved in every way. He was able to walk around and went as far as three miles from home and back without aid; he performed work of a light nature but was unable to sustain prolonged mental effort as, of course, would be required in attending school.

Three and one-half years later, in 1900, I was called to attend him for a severe attack of dysentery, which left him in a very weakened condition. His height at this time was five feet, six and one-half inches; age fifteen. He grew somewhat better after the dysentery, but severe headaches again set in. He was able to be up and do light work, and his appetite was very good. The headache grew worse and more frequent and was associated with vomiting, fever and gradual loss of sight. The sense of smell was good and the hearing was at no time impaired. He articulated with some difficulty. I was not able to examine his eyes at this time on account of distress caused thereby to the patient. Efforts to stand or sit up, even to think, caused severe headache and vertigo; loud noises produced the same effect. The superficial reflexes were good. There was appreciable hypertrophy of the heart. The urine was cloudy, some albumen was present. Drs. McFarlane, Happel and Elting saw the patient at this time with me. He was then six feet, four and one-half inches in height. His condition steadily grew worse, the pains in the head and limbs increased. He was unable to take anything but liquid nourishment in small quantities; the temperature was F. 103 degrees and F. 104 degrees at times. For the last three or four weeks he received anodynes to relieve the pain in his head. He was perfectly rational until two days before death, then stupor set in and death occurred from exhaustion. His height one month before death was six feet, seven inches.

Permission to hold an autopsy was obtained with great difficulty, and Dr. Happel and myself were allowed to remove

the *brain* only, which was sent to the Bender laboratory. The pathological conditions, as described under chronic hydrocephalus, were found. Not only the lateral, third and fifth, but also the fourth ventricle, were found distended; the fourth distended to such an extent as to obliterate the dentate space in the cerebellum. On examining the upper wall or roof of the enormously distended fourth ventricle, a small flattened tumor one by three-quarters by one-quarter inch was found imbedded between the ependyma and the body of cerebellum. Upon examination by the microscope it proved to be a hematoma. This effusion may have caused in the early stage of this case an irritation resulting in closure of cerebro-spinal opening which resulted in secondary chronic hydrocephalus, a condition so aptly described by Hilton, in Rest and Pain. It hardly seems probable that this effusion should have taken place at a later stage, i. e., when the ventricles were distended with fluid, in just this one place. Especially as the veins only are very much dilated and a rupturing of these is possible when the ependyma is softened, which in this case was found to be the reverse.

In addition to chronic hydrocephalus we have here plainly a case of gigantism, not acromegaly. The patient was six feet, seven inches in height; weight, about one hundred and ninety-three pounds; orbits not abnormal in size; frontal sinuses not enlarged, and the jaw was not prognathous. The nasal bones were normal; the bones of the cranium compared with the size of the face, normal. The feet, hands and limbs were in proportion to his height; in fact, feet and hands were small compared with his height. The pituitary body, when examined microscopically by Dr. Blumer, was found to be virtually normal in size and construction, excepting a slight hyperplasia.

Marie's aphorism, that acromegaly is gigantism of the adult, and that gigantism is acromegaly of adolescence, seems to have been acknowledged by Brissaud, who claims that when abnormal growth begins before union of the epiphyses the result is gigantism, when after the period of natural growth, the result is acromegaly.

Sternberg holds that gigantism and acromegaly are two different conditions, gigantism being an anomalous growth and not a disease per se; also that enlargement of the

hypophysis, prognathism and the other symptoms of acromegaly are not regular accompaniments of gigantism, but are signs of acromegaly, which is an acknowledged disease, with well marked symptoms. In the majority of cases where the hypophysis was enlarged, this was due to a distinct new formation or neoplasm, cyst or tumor, instead of an actual hypertrophy. He claims that gigantism shows a disposition to a general dystrophy which *results* in acromegaly; therefore, in his opinion, fifty per cent. of all giants suffer from this disease and die of it. He admits that twenty per cent. of all acromegalic cases are giants, and forty per cent. of all giants are acromegalic.

Virchow announces that, in his opinion, acromegaly is a secondary state of degeneration after overgrowth of muscle or bone.

Dallemange and Sanger-Brown still think that changes in the pituitary are *secondary* only to the general nutritive disturbances of this disease, i. e., acromegaly.

According to Woods-Hutchinson who, as we know, has lately written an exhaustive treatise on this subject, acromegaly and gigantism are simply expressions of one and the same disease. The pituitary being functional in both, he says, they represent distinctly morbid conditions of very nearly the same course, history and degree of fatality.

I may add here that it seems probable, also, from reports made by Woods-Hutchinson, Henry Hun and others, that the pituitary plays an important part in dwarfism, rickets and the dwarf-like skeleton of Cretinism. In a *large* percentage of cases of both acromegaly and gigantism we have an enlarged pituitary. Out of forty-eight cases of acromegaly in which autopsies were held forty-four presented an enlarged hypophysis. Of nine cases of so-called pure giants or giantesses, in no less than eight pituitary enlargement was found. That the pituitary, therefore, is apparently the proportion regulator of the entire body seems to be, thus far, the most scientific and logical deduction and explanation presented and this hypothesis may be accepted in default of a better.

According to the foregoing, then, the gigantism of H. L., just described, might have formed eventually into a true case of acromegaly with pituitary enlargement, of which the slight hyperplasia found may be an early indication if the symptoms of chronic hydrocephalus and its fatal results had not intervened.



## HIP-JOINT DEFORMITIES.

*Read before the Montgomery County and Amsterdam City Medical Societies, March 1, 1903.*

BY CHARLES EDMOND DAVIS, M. D.

Surgeon to the Child's Hospital, Albany.

*Gentlemen of the Medical Society of Amsterdam and Montgomery County:*

The subject which I present for your consideration is one about which a great deal has been written and that has been very much in the public eye of late, owing to the fact that one form of hip-joint deformity has been successfully treated by a scientist from abroad. Therefore I take the liberty of calling your attention to the subject of hip-joint deformities, so that your memories may be refreshed with the fact that not all of the deformities of the hip are congenital dislocation.

In my work at the Child's Hospital, cases have lately been referred to me as congenital dislocation which were hip-joint disease or one of the other deformities of the hip. It is the early recognition of the deformities of the hip which makes a cure possible.

Let us first consider for a moment the anatomy of the hip-joint. "It is made up of the os innominatum and head of the os femoris, the femur being received into a deep cavity of the former, making a ball and socket joint. The head of the femur and acetabulum are cancellous in structure, quite vascular and subject to inflammation. The acetabulum is lined with cartilage at all points, except at a circular pit, which is cushioned with fat, and is for the insertion of the ligamentum teres."

The ligaments of the joint are the capsular, ileo-femoral, ligamentum teres, the cotyloid and the transverse. The capsular ligament is the largest and strongest capsule in the body. It extends from the outer border of the acetabulum to the anterior inter-trochanteric line and neck of the femur. The strength of this ligament is greatly increased by the ileo-femoral ligament, which extends from the anterior spinous process of the ilium to the anterior inter-trochanteric line.

This ligament has been named the "Y" ligament by Dr. Bigelow, of Boston, because of its shape. The cotyloid ligament is a thick prismatic ring of fibro-cartilage attached to the brim of the acetabulum, by which the cavity is deepened. The ligamentum teres is attached to the pit in the middle of the head of the femur and is inserted by two fasciculi into the notch of the acetabulum and cotyloid ligament. The transverse ligament is contiguous with the cotyloid from one point of the notch to the other of the acetabulum. The synovial membrane lines the capsular and free surfaces of the other ligaments mentioned above.

We will begin our discussion of the causes of deformities of the hip by the commonest cause of all deformities resulting from inflammations of the joint surfaces.

Synovitis is usually the result of "exposure to cold, sudden changes in temperature after violent exercise," in which the joint has been constantly in use. "An inflammation of this membrane always results in an effusion into the cavity of the joint. If the synovitis be sub-acute, it may not be followed by disintegration" or it may be followed by complete disintegration. Especially is this true when the inflammatory condition is due to the presence in the joint surfaces or synovial membrane of tubercle bacilli. "The synovitis may be *very severe*, with a great amount of effusion, causing pain and deformity of the joint progressively involving the surface of ligaments and bony structure of the joint."

Any violent straining of the ligamentum teres, destroying any of the vessels which supply the head of the bone, may be followed by necrosis as a result.

Disease may begin in the blood vessels as an extravasation and by constant exaggeration and irritation becomes an organized inflammatory zone extending to all parts of the joint.

Sayre sums up the cause of hip-joint disease by saying: "In my judgment, the disease is not of constitutional origin, because so many cases recovered with or without deformity and no systemic symptoms or manifestations, and because if the disease is treated locally recovery takes place." He regards the cause as invariably traumatic and not dependent on constitutional taint. All pathologists of the present day are inclined, however, to regard the disease due to the

tubercular bacilli in the joint surfaces, carried there by the blood after hyperemia or injury of the joint has occurred.

Deformity of the joint begins in the second stage of the disease, after effusion into the joint and "apparent lengthening" with slight abduction, with the gluteo-femoral crease lower or absent, and a certain amount of fixation or spasm of the muscles of the joint, causing a constant degree of flexion. Abduction is limited. The limb cannot be crossed over the well limb without moving the pelvis. Abduction cannot be carried to the fullest extent. Atrophy of the thigh or entire limb is an early symptom. Pain in the knee is found early, and is explained by Barwell by "direct irritation of the nerves passing in close contiguity to the joint, the obturator nerves, sciatic, gluteal and anterior crural, and by spasm of the muscles." Later the foot becomes everted and more markedly abducted. This is largely due to effusion into the joint. The night cry due to a spasm after relaxation of the abductor muscles, is caused by the sudden bringing together of the diseased surfaces of the joint.

Following closely on the above condition, the limb is inverted, flexed and abducted, the pelvis is raised on the affected side, the position being due to the evacuation of the effusion in the joint into the surrounding tissue, and the contraction of the abductor muscles. The actual loss of substance of the bony structures of the joint accounts for the actual shortening.

It is an interesting fact to know that Dr. March, of Albany, gave to the profession the first correct knowledge of the pathology of this disease, and laid down the principles of treatment which have been brought to such a success at the present time. Dr. March brought out the fact in a paper before the American Medical Association in 1853, that the deformity was not due to "true luxation" of the head of the femur.

Deformities of the joint which may be mistaken for hip-joint disease are, (1st) sacro-iliac disease, which is really more often mistaken for Pott's disease. There should not be much doubt when this disease presents, because the pain, swelling and abscess are not around the hip-joint.

There are many other conditions which cause deformity of the hip, but I will only refer to the differential diagnosis

between them and hip disease, except in congenital dislocation, of which I will speak more fully. I shall confine my comparison to the third stage of hip disease, because this is usually the stage of the disease for which the physician is consulted. Although we deplore the fact that this is true and often regret when we see these cases late in the progress of the disease that a physician was not consulted when the pain and soreness first began.

#### *Periostitis of Femur*

Mostly commences suddenly.  
Femur enlarged.  
Femur painful on pressure  
Joint free.  
Extension and abduction, impaired.  
Joint painless.  
Pelvis oblique and spine curved.  
Contraction of flexors and abductors.

#### *Pott's Disease*

Preceding pain in spine,  
Posterior and anterior deformity.  
Flexion and shortening.  
Limb extended under chloroform.  
Pelvis square.  
Nates even.  
Walks by supporting spine, hands on knees.  
Hip articulation free.  
Slight retraction of flexors.

#### *Congenital Dislocation or displacement*

Generally occurs in both hips.  
No pain.  
Buttocks elevated.  
Pelvis forward and downward.  
Change in prominence of buttocks by extension.  
Trochanters move up and down when walking.  
Motion free and painless.  
Trochanters  $\frac{1}{2}$ -2" above Nelaton's line.

#### *Dislocation of Femur*

Produced suddenly.  
Limb shortened.  
Adducted.  
Head felt under gluteus Max.  
Apex of trochanter above Nelaton's line.  
No permanent contraction of muscles.  
Pelvis square.  
Walks healthy leg bent.  
Entire sole of foot touches ground.

#### *Third Stage*

Gradual in stages.  
Not all enlarged.  
Not painful.  
Almost fixed, crepitus.  
Also.  
Painful on pressure.  
The same.  
The same.

#### *Third Stage*

Pain in hip.  
Lateral and anterior deformity.  
Flexion, abduction and inversion.  
Cannot.  
Pelvis oblique.  
One higher.  
Walks on well leg without resting hands on knees.  
Almost fixed.  
Contraction of flexors and abduction.

#### *Third Stage*

Invariably in one.  
Extreme pain.  
Buttocks lower on diseased side.  
Pelvis oblique.  
No change.

No movement.

Always limited and painful.  
Passes over trochanter.

#### *Third Stage*

Gradually.  
Limb shortened-inverted.  
Adducted.  
Head not felt at all.  
Below or even.  
Permanent contraction of muscles.  
Raised and oblique.  
Healthy leg straight.  
Only with ball of foot.

H. A. Wilson<sup>1</sup> reports twenty-four cases of fracture of the hip with radiographs, treated by extension four to six weeks;



abduction excessive in one case; adduction excessive in ten cases; rotation absent in one case; impaired in two; flexion absent in one case; slightly limited in sixteen, and normal in six cases.

V. P. Gibney<sup>5</sup> is of the opinion that for deformities of the hip, osteotomy is preferable to force to secure a more lasting result.

Congenital dislocation of the hip occurs much more frequently in the female than male and is usually double. The reason why it occurs more often in the female, and the reasons for its occurrence have not been fully demonstrated, but many theories have been advanced, such as non-development of the parts and a defective ovum. Others claim injuries to the foetus in utero as the exciting cause, and still others that displacement takes place at the time of parturition.

The usual dislocation is upwards and outwards. The acetabulum may become filled with fatty material or cellular osseous material, and the head of the bone deprived of its articular cartilage, flattened, irregular in form and atrophied. The capsular ligament becomes elongated, but retains its integrity for many years, after which it may rupture and the head of the femur come in contact with the ilium. The ligamentum teres is of course greatly stretched, and may become slender and rupture.

If the head of the bone passes through the capsule, a new articular surface begins to form and after years more or less fixation of the head of the bone takes place.

The absence of atrophy, spasm and fixation, and the fact that the trochanter of the hip affected is above Nelaton's line, should leave little doubt as to the diagnosis. Coxa vara, however, may be confounded with congenital dislocation, because the trochanter is above Nelaton's line, there is mobility of the hip-joint, but there is not in this condition any up and down motion of the head of the femur, and flexion beyond a right angle cannot be performed without abduction. Of course, at the present time, when the diagnosis is in doubt, it can be verified with the X-ray.

I believe the condition of congenital dislocation does more frequently occur than we suspect, and many cases of it are treated for hip-joint disease. In the last six months I have seen eight cases, all but one past the age of possible interference.

This leads me to the question of treatment for hip-joint disease, it being, of course, based on the principle of rest. In the last three years in my work in the Child's Hospital, we have had most remarkably successful results without deformity and with apparently perfect joints. The wonder is that so much can be done with these cases if you can have the case where it is completely under your control and away from the sympathetic thoughtlessness of the parents.

In 1888, Buckminster Brown reported a successfully treated case of congenital dislocation of the hip (but later reported its relapse). The treatment was mechanical, with extension. Bradford reported a case in which the result was satisfactory. The case was kept in bed one year and wore apparatus two years afterward. Paci recommended reduction by forcible manipulation, with fifteen cases and perfect results, was tried by others but did not succeed so well.

Hoffa, of Würzburg, first suggested the bloody or open method of reduction and the cutting of all the short muscles, while Lorenz, who adopted this method and was one of its strongest advocates, believed in preserving all the short muscles and cutting the long ones. Lorenz reported 230 cases in 1896, without a failure. Myers collected 177 cases of Hoffa's operation, with a mortality of 3.3, mostly from shock and hemorrhage. It would seem from the reports recently and the statement of Lorenz himself, that we have at last reached a scientific method of the treatment of this deformity which gives results that places the method beyond a question of doubt as the best and surest treatment for this deformity.

W. A. Wood<sup>2</sup> reports seven cases of congenital dislocation with the conclusion that the bloodless method will give perfect results, especially in young cases. In older cases the position of the bone will be improved.

H. A. Reeve's<sup>3</sup> method consists in reduction by Bigelow's and Paci's method. While limb is in place extension instrument is applied. It diminishes lordosis, diminishes shortening and improves the gait.

Novi Jossierand<sup>4</sup> made an autopsy fourteen months after correction. The muscles showed slight atrophy, especially adductors. The cartilaginous layer was less developed on bottom and sides of acetabulum.

The method, as observed by myself and from notes taken

of the description of it by Lorenz at the clinic in the hospital of the Cornell Medical College, New York, is as follows:

The operation is recommended only in cases of bilateral dislocation up to seven years, in unilateral up to ten years of age.

The first manipulation consisted in grasping the thigh and leg with both hands, while one assistant held the thigh and body on the opposite side, the operator forcing the head of the femur up and down, which he called a telescope movement, in order to loosen the head of the bone from its false attachments above the brim of the acetabulum; then forcibly adducting the thigh, using the weight of the body against the outer surface of the thigh as well as a considerable force with both hands. Next the adductor muscles were stretched by super-abduction of the thigh with the pelvis fixed by an assistant. The stretching of these muscles was assisted by kneading and pounding with a great amount of force the adductor muscles while the thigh was being held at a point of extreme adduction. Next the posterior muscles of the thigh were stretched by placing the child on its belly and super-extending the leg so that the heel of the foot touched the buttock.

After the muscles were stretched in this manner and the head of the bone loosened from its attachments, extension was used to reduce it to a point opposite the acetabulum. This was accomplished after applying sufficient strength on the part of the operator to require two assistants to hold the child on the table. After the head was brought down to the acetabulum the thigh was again forcibly abducted and the head of the femur forced upward and forward into the groin, to stretch the capsular ligament of the joint, assuming, of course, that it had not been previously ruptured. The head of the bone could be seen in the groin where a depression had previously existed when the thigh was extremely abducted, and in this position the cast is applied to remain eight to ten months. Then it is re-applied, with the thigh half way abducted and left in this position for three to six months, then brought into a straight line and the plaster re-applied for about the same length of time, when it is removed and passive and active movements of the thigh made. After the first few weeks a high shoe is placed upon the foot and the child allowed to walk.

Lorenz operated 200 times in this country and it remains to be seen what the results will be. Other operators in this field of surgery have taken this operation up, and we may expect in the next two years some elaborate reports.

There seems to be one element of failure in this operation when performed in old cases; first, the difficulty of reduction, due partly to the fact that the head of the bone has slipped out of the capsule and the ligamentum teres has been ruptured. When this is the case, a part of the capsular ligament may get beneath the head of the bone when reduced to the acetabulum and cause a luxation. I feel sure, however, that a man with the intelligent experience of Lorenz would not so enthusiastically endorse and recommend this operation if it did not have the merits claimed for it.

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### Clinical and Pathological Notes

*The Report of a Case of Enlarged Prostate.* BY DOUGLAS C. MORIARTA, M. D.

Read before the Medical Society of Saratoga Springs

This gland has always been a cause of much suffering and misery in a large percentage of aged males and no doubt will continue to be so. It should be less, however, as the conditions and remedial measures are comprehended better, and it would seem that we are beginning to understand how to relieve the condition. The percentage of males who reach the age of seventy who are thus afflicted is about twenty, although men much younger are often troubled in this way.



The first symptom noticed is the difficulty in starting the flow of urine; second, the deficiency in the force of the stream; third, the frequent calls to urinate, especially at night. This feature is of use in differentiating enlarged prostate from vesical calculi.

Often in these cases, after some exposure or fatigue, we have acute retention and the water has to be drawn. Once this is done, muscular power seems to be abolished in many of these patients, independent of the amount of glandular obstruction, and catheter life, with all its misery and annoyances, becomes a necessity. Now and then a patient seems to be immune to the infection incident to frequent catheterization; most of them, however, will develop in infective cystitis, even though constant care of the catheter, bladder and penis is observed.

There are many procedures suggested to keep the catheter sterile, but the one proposed by Morton is the simplest, as he has demonstrated it to be perfect bacteriologically, and the solution does not affect the soft instruments. His formula is as follows:

℞

Glycerini

Aquae aa ʒ viii.

Hydrargyri chloridi corrosivi gr. vii ss.

If cystitis occurs and there is residual urine, intense agony, associated with organic changes in the bladder, ureters, and kidneys, is prone to occur. In any event, the patients find a catheter a necessity for the remainder of their lives, unless operative measures are instituted. These are made necessary by frequent, difficult, painful and bloody instrumentation, from which complications arise in spite of the most conscientious and enlightened care of the catheters; or as a matter of election to avoid the annoyances and concomitant destructive changes.

Many of these patients do not present themselves to their physician until they have severe cystitis, with ammoniacal urine and infected kidneys, which makes any procedure hazardous. Operative procedures will then only be undertaken when their condition is so unbearable that any measure promising relief is acceptable, regardless of the risk. Various procedures and means have been advocated in the past.

Over-stretching of the prostatic urethra, introduced by Physick nearly one hundred years ago, and later advocated by Sir Henry Thompson, has been discarded. Massage of the prostate, either by the finger or instrument, has had some advocates but is neither much used nor of much service. Perineal drainage is by all means the simplest procedure, and consists of a simple incision through the perineum with a grooved staff in the urethra. The urethra is opened in front of the prostate and a catheter or drainage tube is introduced. This is left a few days, or indefinitely, depending on the condition and benefit. This procedure is useful when drainage is desired. In 1884, Harrison suggested that after the above is done, we divide the prostatic bar of the gland, or remove some part of the gland, or stretch the prostatic ring with finger or sound, leaving drainage in; the indications are essentially the same as perineal drainage.

Suprapubic drainage has some advocates, but to my mind is not, *per se*, the method of election. Hunter McGuire is the pioneer of this procedure in this country. Its advantages are that it allows digital and ocular examination of the bladder.

Prostatotomy, or the division of the bar at the bladder neck, is practiced with the Mercier instrument which has a concealed knife, or with the electric cautery (Bottini's method), which burns a canal through the middle lobe. This latter method has given some brilliant results, but is not suited to the greatly enlarged gland. Its advantages are absence of hemorrhage and very little shock, and it can be done without anesthesia. It yields good results in skilled hands.

Prostatectomy, or the removal of all or part of the gland, is done either through the perineum or by the supra-pubic route, or by both. Supra-pubic prostatectomy has been elected because the work is not done blindly and the parts are more easily reached. But it has been abandoned because of hemorrhage, shock and incomplete removal of obstruction, except in special cases. Then comes the perineal route, with a suprapubic opening into the bladder, or into the space of Retzius, in order that pressure can be made on the gland from above and bring it within reach at the perineum. Still later the supra-pubic incision was given up and several better devices suggested to retract or pull down the gland through the perineal incision. The best one seems to be that of Sym,

which is a rubber ball on a staff, introduced through the perineal incision into the bladder and then inflated. Later it was suggested that we make the perineal incision and expose the gland or capsule, when it can be enucleated without any special retraction.

White's suggestion and operation was first introduced in 1893. He deduced that because of the analogy between the prostate and the uterus castration should have the same effect on the hypertrophied prostate as oophorectomy has upon uterine fibro-myomata. He followed his original paper with others and many operators took up the suggestion and much has been written on the subject. His results were good, so far as the restoration of the urinary function is concerned, but there is an unusually high mortality accompanying this procedure.

The anatomical condition suggests surgery. The gland, when it enlarges, is forced upward and backward, on account of the firm tissues below and in front; this of necessity raises the outlet of the bladder while the base of the bladder remains fixed. The urine is thus dammed back, and that which remains after each micturition, is of course residual. As time goes on, this increases in quantity. Another frequent factor is the diminished muscular power of the bladder, which may tend to dilatation. And, per contra, the bladder, from irritation and hypertrophy, contracts. Often the residual urine undergoes ammoniacal decomposition, with all its concomitant complications and suffering.

This condition is diagnosed clinically by the age of the patient, the frequent micturition, especially at night, the residual urine, the character of instrument necessary to enter the bladder, the exaggerated length of the staff required to draw the urine, and, finally, by palpation of the enlarged gland through the rectum. Often, for the reasons stated, the gland is forced up and backward and enlargement cannot be made out in the rectum.

The condition has to be differentiated from stricture of the urethra more often than any other, and this is ordinarily supposed to be easily done. If there is stricture present, it is either traumatic, or there should be a history of previous urethritis; the frequency of micturition when at rest should be less, and increased effort in the act of urinating should

accomplish better results. Then an instrumental examination of the urethra for stricture should determine it.

When the urethra of a patient suffering from enlarged prostate is examined, it is often impossible to pass the ordinary curved catheter, and a special or prostatic catheter is required. Or if a soft instrument is used, one with one or two elbows is needed. The distance necessary to introduce a catheter is of differential diagnostic value; if urine flows when seven or seven and one-half inches have been introduced, there can be but little prostatic enlargement. If eight or nine inches, or even more, of the catheter staff are required, and you then have to depress the instrument markedly, it is pretty certain you have prostatic enlargement.

The history of my case is as follows:

J. L., age seventy-two; American; in early life a farmer, later a butcher; married; temperate and of better than the average habits. He has been asthmatic for past twenty years from nasal polypi, and at present has some arteriosclerosis and interstitial nephritis; he denies gonorrhoea or traumatism to the urethra. Four years ago he was in bed with some stomach trouble for three months, and twice during that time had to have his urine drawn. During the past two years he has been obliged to urinate frequently; the intervals between urination are growing steadily less and the act is accomplished with much straining and distress at end of act. He seldom feels relieved after urinating. The quantity of urine passed is small each time, and the urine has been slow to start during the time mentioned the force steadily diminishing. The patient has been up and about and considered himself ordinarily well, with normal appetite, bowels and sleep. The present trouble came on abruptly after some exposure while doing unusually heavy work.

At my first visit he was suffering intensely from a full bladder, which I relieved only after a prolonged effort. I first tried a soft catheter, followed by one with an elbow—a Mercier instrument—then ordinary silver instruments of varying sizes and curves, with all of which I failed to enter the bladder. I finally succeeded with a silver prostatic instrument of large curve and long staff; this, after it had passed the obstruction, was found to have been introduced about nine inches, and the end positively depressed between



his legs before the urine would flow. I found a stricture of about twenty-two calibre, four and one-half or five inches from the meatus, which was not a factor, as the obstruction was at the prostate. The patient was never able to void urine after the first catheterization. The desire to urinate was intense after an interval of an hour and became agonizing if not relieved at once. Each time catheterization was attempted unusual pain and difficulty was experienced; blood in considerable quantities was a complication at each effort. The catheterization became so frequent, urgent and painful that I had a heavy stylet made, moulded after my prostatic catheter, and succeeded in introducing a soft catheter into the bladder for irrigation and drainage, which I left there for about three weeks. Though the facilities for aseptic catheterization were only ordinary he did not have an infection; this was due perhaps to the prompt use of urotropine and irrigations of boric acid. We removed the drainage several times to note the result, but it had to be returned at once; he was miserable with it and worse without it. His existence was so distressing that he finally accepted prostatectomy with its risks. He accordingly came to the operating table. An internal urethrotomy was done for the stricture mentioned; a full-sized sound would now reach the bladder, but would not enter it. A smaller instrument was tried and, after some manipulation, passed into the bladder; on withdrawal it could not readily be reintroduced, though we succeeded after considerable manipulation. I then introduced a Gross instrument to the obstruction at the neck of the bladder, and cut; this was followed with a divulsor, when a sound could easily be introduced into the bladder, or any of the small silver or rubber catheters which could not previously pass the obstruction. There was now no apparent prostatic obstruction, and the conclusion was reached that our trouble was a stricture of a diaphragm-like formation, and not an enlarged prostate. We had had no opportunity to determine if there was any residual urine.

My associate agreed that we put the patient to bed with drainage and defer the prostatectomy. After a few days, the drainage was removed. Catheterization was now not painful or difficult, but had to be continued regularly about once in four hours for several weeks, after which time he

could void a small quantity of urine occasionally; this has increased, so that now he only has to be catheterized at night. Since he has commenced to void urine we have determined that there is six ounces of residual urine.

In closing, there are several points of interest in the case:

1. the diagnosis;
2. the complete loss of muscular power. This has gradually returned, but weakness is still persistent at night;
3. his existence was so miserable that not only was he willing to risk his life, but his condition made it imperative for us to act, notwithstanding his very poor general health;
4. the operation of election was prostatectomy, instead of simple perineal or supra-pubic drainage, Bottini's or White's operation.

We thought a perineal prostatectomy was the choice, because we judged the gland too large for simple perineal drainage or Bottini's operation; and, as I have stated, for drainage alone I do not believe the supra-pubic route should be accepted. The patient rejected White's operation.

The diagnosis of enlarged prostate was made because of the failure of ordinary instruments to enter the bladder and the character of those required to do so; to this was added the length of staff required to draw the urine, and the fact that this had to be depressed. We did modify our diagnosis after cutting what could only have been a very thin obstruction, and thought after all we were dealing with a stricture. Later developments made it clear that we were originally correct.

### Editorial

"No doubt you see the significance of this discovery of mine?"

"It is interesting chemically, no doubt," I answered; "but practically —"

"Why, man, it is the most practical medico-legal discovery for years. Don't you see it gives us an infallible test for blood stains?"

"It seems to be a very delicate test," I remarked.

"Beautiful! beautiful! The old guaiacum test was very clumsy and uncertain. So is the microscopic examination for blood corpuscles. The latter is valueless if the stains are a few hours old. Now, this appears to act as well whether the blood is old or new. Had this test been invented, hundreds of men now walking the earth would long ago have paid the penalty of their crimes."

*A Study in Scarlet.*

A. CONAN DOYLE

The Identification of  
Human Blood.

The detection and identification of blood stains has been of the greatest importance from a medico-legal standpoint. The occurrence of stains or spots, supposed to be blood, upon the clothes of individuals suspected of murder may

lead to the arrest, and if the stains prove to be blood, to the conviction of such individuals.

Up to the present time certain blood tests, having a legal status, have been regarded by most experts as determining absolutely the *presence* of blood, but only with relative accuracy the *kind* of blood. It is true that a few experts have been known to swear that blood was of human origin from measurements of the red corpuscles, but the average size of the human corpuscles is so closely approached by the average size of the blood cells of certain of the lower animals, that most experts as a result of measurements, would only state that a given blood was, or was not *consistent* with human blood.

It would seem as if in the new precipitin test, introduced into legal medicine by Uhlenhuth, we had at last a specific means of detecting human from all other forms of blood. The test depends on the principle, that the injection of the blood, or blood serum, of one species of animal, into the tissues of an animal of another species, causes a reaction on the part of the cells of the latter which results in the formation in its blood serum of a substance which causes a precipitate in solutions of the kind of blood originally injected, and in that kind only. Thus, if a rabbit is inoculated from time to time with chicken blood, its serum will cause a precipitate in solutions of chicken blood, and chicken blood only. Similarly the serum of a rabbit treated with human blood will produce a precipitate in solutions of human blood and human blood only.

From the standpoint of the principle involved the test is easily intelligible, and should apparently be easy of application. In a sense the practical application is easy, but fallacies are fairly numerous, and the application of the test requires rigid attention to technical details and numerous controls to avoid the fallacies. The more important fallacies lie in the degree of concentration of the humanized serum, the time limit set on the reaction, and the clearness of the tested blood solutions. The question of the age of the blood stains plays but little part, nor does the strength of the solution to be tested for human blood matter very much, unless the solutions are excessively weak. The humanized serum must be well diluted, the tested fluids must be clear,

and the reaction must appear within such a time that the resulting precipitate could not be due to the presence of bacteria. Under proper conditions this is probably the most delicate test for blood yet devised, but it is eminently a test to be applied by trained technicians, and not by the ordinary practising physician.

The annual report of this worthy charity for 1903 has recently been issued, and shows not only a growth in the number of patients treated, but also an enlargement in the scope of the work, which is but another evidence of the progressive spirit with which this Corporation has always been imbued.

During the year ending February 1st, 1903, 625 cases have received the attentions of the Guild. Of these 314 were charity cases, 240 were able to pay some fee for their attention, and 28 were treated at their homes. The number of visits during the year was 9454, of which 6859 were visits with nursing treatment, and 2595 visits for professional supervision of convalescents. During the year \$2,528.00 were collected for the uses of the Guild.

The progress of the year includes the placing of the dental department upon a regular basis, this department up to December 1902, having been only provisional, and the proposed enlargement of the obstetrical department so that it shall provide instruction for undergraduate nurses, as well as for medical students. Both of these changes are certainly in the direction of progress.

In conclusion we would again call the attention of physicians to the excellent work done by the Guild, and to the opportunities which it affords them of obtaining the services of skilled nurses in the treatment of their patients who cannot afford a full nursing fee, and also of their charity cases.

## Public Health

Edited by Joseph D. Craig, M. D.

ABSTRACT OF VITAL STATISTICS, MARCH, 1903

	<i>Deaths</i>	1901	1902	1903
Consumption .....		29	18	21
Typhoid fever .....		1	2	1
Scarlet fever .....		0	0	2
Whooping-cough .....		0	0	6



	1901	1902	1903
Diphtheria and croup .....	2	1	2
Grippe .....	10	1	6
Erysipelas .....	1	0	2
Cancer .....	9	11	6
Pneumonia .....	18	17	14
Broncho-pneumonia .....	10	1	4
Apoplexy .....	8	8	11
Bright's disease .....	9	12	20
Accidents and violence .....	4	6	12
Smallpox .....	0	0	1
One year and under .....	27	7	20
Seventy years and over.....	26	22	39

*Deaths in Institutions*

Albany City Hospital .....	9	10	16
Albany Orphan Asylum .....	2	3	2
Child's Hospital .....	1	3	1
County House .....	3	4	4
Dominican Convent .....	0	1	1
Home of Aged Men .....	0	0	2
Home for the Friendless .....	0	2	0
Homeopathic Hospital .....	3	0	3
Hospital for Incurables .....	1	1	1
House of Shelter .....	0	1	0
Little Sisters of the Poor.....	2	1	2
Public places .....	0	4	2
Sacred Heart Convent .....	0	0	1
St. Margaret's House .....	2	1	0
St. Peter's Hospital .....	3	6	5
Smallpox Hospital .....	0	0	1

Total number of deaths for March, 1901, 164; March, 1902, 120; March, 1903, 175. Death rate for March, 1901, 18.55; March, 1902, 13.57; March, 1903, 19.80. Death rate for March, 1903, less non-residents, 18.44.

Marriages .....	38
Births, at term .....	118
Premature .....	2
Still .....	11

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Total..... 131

## WORK OF HEALTH PHYSICIANS

Total number of assignments made in March.....	89
Total number of calls made during March, 1903.....	259
Number of vaccinations made.....	36

## INSPECTIONS

In the Bureau of Markets and Milk, 66 markets were inspected during the month, 1 fish market, 9 fish peddlers, 3 fruit peddlers, 2 milk rooms, 35 milk peddlers, 1 cow stable, and 2 meat venders. Thirteen samples of milk were taken from milk peddlers, on which were made 26 tests. Twenty-two of the tests were found to be above the average of 3.5 of butter fat, and 4 were found to be below the average. Twelve inspections were made of the Public Market.

In the Bureau of Plumbing, 171 inspections were made, of which 126 were of old buildings and 55 of new buildings. Forty-four iron drains were laid, 31 connections with street sewer made, 35 tile drains laid, 33 cesspools, 100 wash basins, 48 sinks, 40 bath tubs, 36 wash trays, 99 tank closets and 14 slop hoppers. One hundred and forty-four permits were issued, of which 107 were for plumbing, and 37 for building purposes. During the month 23 plans were submitted, of which 6 were for old buildings and 17 for new buildings. Three houses were tested on complaint with the peppermint test. Fifteen houses were examined on complaint and 6 were re-examined.

In the Bureau of Sanitation, 52 inspections were made, of which 1 was of a privy, 6 of closets, 5 drains, 4 plumbing, 5 water, 3 filthy yards, 1 filthy alley, 4 filthy cellars, 6 filthy vacant lots, 5 filthy premises, 4 chicken nuisances, 1 dog nuisance, 4 garbage nuisances and 1 smoke nuisance. Twenty-nine re-inspections were made. Eight complaints were found to be without cause and 11 nuisances were found on re-inspection to be abated and 5 were found cleaned. Eighteen notices were served.

## BUREAU OF CONTAGIOUS DISEASES

*Cases Reported*

	1901	1902	1903
Typhoid fever .....	9	5	5
Scarlet fever .....	7	11	13
Diphtheria and croup.....	56	8	11
Chickenpox .....	6	8	11
Measles .....	38	11	22
Whooping-cough .....	0	0	0
Consumption .....	1	4	4

Number of days quarantine for diphtheria:

Longest..... 46    Shortest..... 6    Average..... 26

Number of days quarantine for scarlet fever:

Longest..... 67    Shortest..... 15    Average..... 35 3/7

Fumigations:

Rooms..... 129    Houses..... 28

## ANTITOXIN

Cases of diphtheria reported..... 11

Cases in which antitoxin was used..... 7

Cases in which antitoxin was not used..... 4

There were two deaths from diphtheria; one 2 years 11 months old, sick three days; antitoxin being used 14 hours before death; the other was 2 years 11 months old, antitoxin was used, complicated with broncho-pneumonia.

## BENDER LABORATORY REPORT

Cultures taken for diphtheria:

Initial positive	Initial negative	Release positive	Release negative
8	32	30	28
Tubes spoiled..... 1			
Total..... 99			

DEATHS FROM INFLUENZA, PNEUMONIA AND WHOOPING-COUGH,  
CITY OF ALBANY, MARCH, 1903

CHIEF CAUSE	CONTRIBUTING	AGE
Pneumonia .....	Influenza .....	41 years
Influenza .....	Senile Debility.....	79 years
Influenza .....	Heart Exhaustion.....	74 years
Pneumonia .....	La Grippe.....	53 years
La Grippe.....	Old Age.....	69 years
La Grippe.....	Exhaustion .....	73 years
Pneumonia .....	La Grippe.....	35 years
Acute Bronchitis.....	Grippe .....	30 years
Arterio-sclerosis .....	La Grippe.....	70 years
Broncho-pneumonia .....	.....	1 month
Broncho-pneumonia .....	.....	59 years
Broncho-pneumonia .....	.....	9 months
Broncho-pneumonia .....	Bulbar paralysis.....	55 years
Broncho-pneumonia .....	Old Age.....	84 years
Pneumonia .....	.....	30 years
Pneumonia .....	.....	6 months
Pneumonia .....	Exhaustion .....	71 years
Pneumonia .....	.....	91 years
Pneumonia .....	.....	9 months
Pneumonia .....	.....	1 month
Pneumonia .....	Exhaustion .....	8 months
Pneumonia .....	.....	3 years
Pneumonia .....	.....	47 years
Pneumonia .....	.....	1 month
Pneumonia .....	Exhaustion .....	48 years
Pertussis .....	.....	10 months
Whooping-cough .....	Indigestion, Exhaustion...	4 months
Catarrhal Bronchitis.....	Whooping-cough .....	1 year
Whooping-cough .....	Pneumonia .....	1 year
Pernicious Anaemia and Ex-		
haustion .....	Whooping-cough .....	1 year
Chronic Pneumonia.....	Whooping-cough .....	2 years

## Society Proceedings

### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A special meeting of the Medical Society of the County of Albany was held in Alumni Hall, on Wednesday evening, April 1, 1903, to take action relative to the bill now before the Legislature relating to the unification of the entire educational system of this State under the exclusive supervision of the Regents of the University of the State of New York.

The meeting was called to order at 9 o'clock P. M., the President, Dr. Ward, in the chair. The following members were present: Drs. Ball, Bartlett, Blumer, Culver, Curtis, Davis, Elting, George, W. H., Hinman, Laird, Lanahan, Lempe, Lochner, Mereness, Munson, Murray, Neuman, Papen, Pease, Perry, Richardson, Rooney, Root, Shaw, Traver, Vander Veer, A., Vander Veer, E. A., Ward.

The SECRETARY read the following letter and the following resolution:  
Dr. A. W. ELTING, Albany.

*Dear Doctor:*—Possibly you may not know of the efforts which have been—and are still being—made to interfere with the work of the Board of Regents in this State. At any rate we desire to call your attention to the fact and ask your aid.

The Board of Regents of the University of the State of New York has been a constitutional body since 1895, having been incorporated in 1784. It is believed it would be in the interests of educational institutions if the entire educational system of the State was united under the supervision of this Board. The influence of the Board of Regents has always been along the line of higher education, and possibly nowhere has this been more positively felt than in the creating and maintaining of our present medical standards.

The peculiar fitness of the Board of Regents for such a general exclusive supervising power was attested by Governor Odell in his address at the University Convocation in July last, when he said of the Regents that they "are absolutely without partisanship and actuated by the highest motives and the purest sentiment." To this just tribute the physicians can add expression of their appreciation of the Regents' independent, impartial, high-minded and intelligent administration of the laws of late years in aid of the elevation of the character of the medical profession.

Such administration has contributed immensely to the most notable and gratifying success which has been achieved in that direction. Will you not aid in this work by having your County Medical Society pass a resolution along the line of the copy enclosed herewith, and if your Society does not meet soon will you not sign a similar expression as a declaration of your personal endorsement?

If the officers of your Society have changed will you in addition to sending Mr. Parsons your endorsement, send these papers to the new officers that they may do the same?

Thanking you, we are, very truly your servants,

FRANK VAN FLEET,  
ARTHUR G. ROOT,  
ERNEST WENDE,

*Committee on Legislation.*



*Resolved*, That the Medical Society of the County of.....hereby declares itself earnestly in favor of the unification of the entire educational system of this State under the exclusive supervision of the Regents of the University of the State of New York, and

*Resolved*, That a copy of this declaration and of these resolutions be sent to the Honorable James Russell Parsons, Jr., Secretary of the Board of Regents, at Albany, N. Y.

....., *President*.

....., *Secretary*.

Dr. CURTIS did not believe that this Society wished to enter into any subject which had a political bearing. We all know that the relation between the medical profession and the Board of Regents has been most beneficial. The assistance of the Regents has been very helpful. The application of the power of the Regents to all matters of education would theoretically be excellent. He had the highest opinion of the work of Dr. Skinner and felt that no one could do better work. No one questions but that it would be wise to have the general as well as the scientific work under the control of one central body and this body might well be the Regents. He felt that it might be wise to join with other bodies like our own in expressing resolutions along the lines of those presented. He presented the following resolutions which, he stated, were similar to those adopted by the Erie County Medical Society, and he believed that it would be wise to adopt these resolutions and endorse the Regents.

WHEREAS, The Medical Society of the County of Albany, State of New York, has called this meeting of members of the medical profession of the City and County of Albany; and

WHEREAS, We have for years noted with regret the lack of unity in the educational system of our State; and

WHEREAS, Legislation is now under consideration for the purpose of bringing about a much needed unification; and

WHEREAS, We believe that education is the foundation of the protection and promotion of the public health, the safeguard of civil and religious liberty, the bulwark of civilization, and that in education only the most intelligent methods should prevail, also that in education there should be unity of direction; and

WHEREAS, The University of the State of New York was conceived in the highest wisdom and for more than a century has been conducted with marvelous ability and success, and now holds the universal confidence of the educators and the educated; and

WHEREAS, It is the purpose of a bill now before the Legislature known as the Stevens' bill, to provide for such unification of the educational system of the State under the direction of the Regents of the University; therefore

*Resolved*, That the medical profession of the City and County of Albany hereby declares itself heartily in favor of the Stevens' bill; that we urge our representatives to use all honorable efforts to secure its passage; that a copy of this declaration be sent to each member of our

delegation and a copy to the Hon. James Russell Parsons, Jr., secretary of the University, Regents' office, Albany, N. Y.

SAMUEL B. WARD, *President*.

ARTHUR W. ELTING, *Secretary*.

Dr. BLUMER agreed with most of the remarks made by Dr. Curtis and thoroughly believed in the unification of education, especially under a non-partisan body. He had read very carefully the various bills introduced, and this bill in particular did not relate to matters having any bearing upon the medical profession. He believed that as a medical profession we were not called upon to take part in any political measures of this character and felt that it was entirely outside of our jurisdiction. He moved that we as a Society take no official cognizance whatever of this matter.

Dr. MERENESS requested the reading of the bill known as the "Stevens' Bill."

The SECRETARY read the bill.

Dr. MERENESS stated that the bill was very broad. It intended to wipe out the Department of Public Instruction of the State of New York. He believed that the two departments would conflict as long as they had the powers possessed by them to-day. The Regents are supposed to have charge of the private and technical schools, while the Department of Public Instruction has charge of the public schools of the State. There is an overlapping of power, and as long as this condition lasts there will be clashing. He believed that the present high medical standing in the State is due to the Regents. The Regents are non-partisan, as far as that goes, a Republican being elected to fill a vacancy when the vacancy occurs during a Republican administration. He wished to endorse the resolutions offered by Dr. Curtis.

Dr. BARTLETT would second the resolutions offered by Dr. Curtis. First, because it is absolutely necessary to do away with the friction between the two Boards. Again, it would appear that a body like the Board of Regents should have charge of the elementary quite as much as the advanced education. He felt that the Department of Instruction did not appreciate the value of kindergarten work. He also felt that educational matters should be as far removed from political influence as possible. He did not wish to criticise the motives of the Department of Public Instruction, but he did criticise the methods and furthermore, he stated that politics do enter into their work. Along the line that Dr. Blumer spoke he saw no reason why the Medical Society should not put itself on record as in favor of the bill.

Dr. DAVIS disliked to say a word against anything that Dr. Curtis introduced into the Society, but he felt constrained to agree with Dr. Blumer that the County Medical Society should not take action upon this bill, which is the result of a quarrel between two departments of State. The fact remains that in New York State we have one of the finest educational systems of the United States, and he felt that as a medical body we should take no part in this quarrel. He believed that the time was inopportune to

introduce such legislation. He stated that the Regents had been criticised in the past because they did not give to educational matters the direct personal attention which is given by the Superintendent of Public Instruction. Some members of the Board of Regents attend the meetings very irregularly and much of the work is left in the hands of the secretary. He heartily agreed with Dr. Blumer that this is not the place to take sides, and seconded Dr. Blumer's resolution to lay this matter on the table.

Dr. Root believed that this was the place to take action upon this matter. The view that this is not a proper place to discuss these matters is not a point well taken. This seems to be a fight to the finish and it becomes us to put ourselves on record as standing upon one side or the other.

There being no further discussion the PRESIDENT called for a vote upon the resolution presented by Dr. Blumer and declared the motion lost by a vote of 16 to 6. The PRESIDENT then called for a vote upon the resolutions presented by Dr. Curtis and declared these resolutions adopted.

Dr. VANDER VEER wished to correct Dr. Davis in one statement. For the past ten years a record has been kept of the attendance at the meetings of the Board of Regents, and of the nineteen members, a fraction over fifteen were present at the regular quarterly meetings. He further stated that no member had been absent for a period of ten to fifteen years.

Dr. DAVIS said that he had for his authority a gentleman in a State department who said that Chauncey Depew had not attended a meeting of the Board of Regents for fourteen years.

ARTHUR W. ELTING, *Secretary*.

SAMUEL B. WARD, *President*.

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#### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held in Alumni Hall, on Wednesday evening, April 22, 1903. The meeting was called to order at 8:45 P. M., the President, Dr. Ward, in the chair. The following members were present: Drs. Ball, Bingham, Carroll, Classen, Craig, Curtis, Elting, Goewey, Hinman, Lanahan, Lomax, MacFarlane, Papen, Pease, Rooney, Sautter, Sweet, M. F., Thiesen, Traver, Trego, Vander Veer, A., Vander Veer, E. A., Van Rensselaer, Ward, Wiltse.

1. *Reading of the minutes of the last meeting.* The minutes were adopted as printed in the ALBANY MEDICAL ANNALS for April, 1903.

2. *Applications for membership.* No names were presented.

3. *Reports and resolutions.*

Dr. MACFARLANE presented the following resolution:

WHEREAS, The Medical Society of the County of Albany learns with satisfaction that the Legislature of the State of New York has passed a special appropriation bill providing for the completion of the State Hospital for Incipient Tuberculosis on lines of policy already adopted by the State; Therefore, be it

*Resolved*, That this Society respectfully petition and most earnestly urge his Excellency, Governor B. B. Odell, to sign the appropriation for the entire amount, viz., one hundred and fifteen thousand dollars, in order that the institution may be completed, equipped and may receive patients without further delay.

*Be it further resolved*, That a copy of the above preamble and resolution be properly signed by the President and Secretary of this Society and transmitted through proper channels to the Governor. The resolutions were seconded and adopted.

4. *Presentation of papers.*

The PRESIDENT stated that on account of the illness of his father, Dr. Neuman would be unable to be present and read his paper.

*Symposium on Smallpox.*

Dr. FREDERIC C. CURTIS read a paper entitled "The Prevention of Smallpox."

Dr. ARTHUR SAUTTER read a paper entitled "Smallpox."

Dr. JOSEPH D. CRAIG read a paper entitled "The Sequelæ of Smallpox."

The PRESIDENT declared the very interesting and practical series of papers open for discussion.

Dr. VANDER VEER moved the secretary that the president, Dr. Ward, be invited to open the discussion. Seconded, carried.

Dr. WARD stated that at one time he saw a great deal of the disease smallpox, and he felt that the popular dread of the disease was out of proportion to its danger, for any sensible man can protect himself and family absolutely. He believed that most of the exanthemata are far more dangerous than smallpox. He said that Dr. CURTIS was responsible for the statement that at the Lathrop Memorial, thirty-five cases of smallpox had occurred without a death. The mortality of smallpox to-day is less than that of any other of the exanthemata, with the possible exception of varicella. He referred to the remarks of Dr. Curtis with regard to the technique of vaccination, and while he felt deeply the value of asepsis and antisepsis in surgery, he nevertheless believed that these were carried to excess by some men in the performance of vaccination. He had vaccinated thousands of persons and had never seen a patient die as the result of it, and had never seen but one patient seriously ill. This was a case of a child, vaccinated by someone else, which subsequently developed a severe erysipelas, and he stated that there was no basis for the assumed dangers of vaccination. He felt that the ordinary antiseptic precautions should be observed, but he did not believe at all in the rigid antiseptic precautions. "Cleanliness is next to godliness," but between that and the extent to which this nonsense may be carried is a wide chasm. He agreed with Dr. Curtis as to the preferable site for the vaccination, and the bad cases which he had seen were on the leg. He did not vaccinate on the leg unless the patient could keep quiet until the inflammation had subsided. He agreed with Dr. Curtis that arm to arm vaccination was preferable, but that it was not practicable. He did not revaccinate until the end of two weeks after to take until the fifth to the seventh day, and he believed that Dr. Curtis the unsuccessful attempt. In his experience vaccination does not begin had understated the period of incubation. He was firmly convinced of



the protection afforded by vaccination and believed that every individual should be vaccinated at infancy, again at puberty, and again during epidemics. He stated that in his own case he had been vaccinated probably fifty times with but one successful take and that in infancy. He emphasized the point made by Dr. Sautter that many mistakes were made in the diagnosis of smallpox because of the haste of the observer to make a diagnosis. He referred briefly to the differential diagnosis from chickenpox.

Dr. VANDER VEER stated that he was an authority on smallpox, and that his claim to this distinction was established during an epidemic of this disease which occurred in Schenectady several years ago. Happening to be in Schenectady at that time he was asked by a policeman as to his opinion regarding the disease which was then prevailing and in reply to this question he stated that he thought the disease was smallpox. The next day one of the Schenectady papers stated that Dr. Vander Veer, who was an authority on the subject, had pronounced the disease to be smallpox. He referred to his experience with smallpox in the army, and later in 1869 and 1870, when he saw several cases in Albany.

He described the old method of arm to arm vaccination by means of scabs, and referred humorously to the antiseptic precautions observed. He referred to one or two cases of cellulitis which he had seen during the past few years and which had resulted from the use of bovine vaccine. He would like to ask whether it had ever been charged against any firm that they had introduced croton oil or cantharides into the glycerine extract. He had always had in mind the statement of certain mothers that they would not be vaccinated while nursing a child and he wondered whether there was any reason for this view.

He felt that the time had been well spent in listening to these most instructive papers and he would like very much to hear further from Dr. Curtis regarding isolation and disinfection.

Dr. ELTING wished to report a case illustrating one of the more unusual sequelæ of smallpox, which was that of a woman of about twenty-seven years of age who contracted smallpox in May, 1902. The disease ran rather a mild course and recovery appeared to be complete and satisfactory. In July, 1902, she sustained a slight bruise of the internal condyle of the left humerus which presented practically no symptoms other than slight tenderness for a few weeks, when she noticed some swelling of the elbow and some restriction of motion. This progressed rather slowly until October, 1902, when she was first seen by Dr. Elting. At this time there was decided restriction of motion of the left elbow joint, as well as considerable swelling about the joint. The maximum disturbance seemed to be in the region of the internal condyle. It was at first thought that the condition was probably one of tuberculosis, although the possibility of its being one of sequelæ of smallpox was entertained. The arm was placed in plaster of Paris for about six weeks, at the end of which time the cast was removed, and while the general swelling had diminished the local disturbance over the internal condyle had increased and there was some evidence of an accumulation of pus. An operation was advised and performed, and a distinct focus of necrosis of the bone, with a small cavity

in the bone about the size of a pea, was found in the internal condyle. There was also some pus beneath the periosteum, as well as in the cellular tissue over it. The internal condyle was excised and the patient made an uninterrupted recovery, the wound healing per primam. Several cultures were taken from the pus and necrotic tissue at the time of operation, but these were all sterile. Examination of the tissue removed showed it to be simply of chronic inflammatory character, and there was no evidence whatever of tuberculosis. Dr. Elting believed that the infecting micro-organism, presumably the streptococcus, had died out before operation. About three weeks ago the same patient was again seen and this time she presented a small swelling over the left clavicle, which was evidently a periostitis and presumably of the same origin. This has diminished somewhat under local applications. The general health of the patient is otherwise excellent.

Dr. HINMAN wished to relate an interesting experience while in charge of the Almshouse in 1900, at which time an attempt was made to vaccinate every inmate of the Almshouse, as well as every new comer. One man who presented at that time had had smallpox in Ireland and presented several distinct pits. This patient was vaccinated and presented a typical lesion as well as all the usual symptoms of vaccinia.

Dr. WARD referred to two cases of smallpox which he saw in the hospital at Alexandria during the Civil War, both of which had had typical previous attacks. He believed that the protective power of both disease and vaccination are liable to die out.

Dr. BLAIR wished to call attention to the fact that unless the antiseptics are washed from the arm the vaccination will often not take. In the German army compulsory vaccination is practised every three years and a case of smallpox is rare in the German army. Regarding the dangers of vaccination he reported a case of pernicious anemia which died shortly after vaccination and he believed that death was due in a measure to the vaccination. He emphasized Dr. Sautter's statement that sufficient time should be taken to make a diagnosis, for time will usually settle a disputed case.

Dr. PEASE called attention to the fact that the Mexicans have been very strenuous in their attempts to make use of the human lymph rather than the bovine. Certain facts relating to the bacteria of bovine lymph may be of interest. Many of the producers of vaccine will admit that bacteria are often present and especially the staphylococcus aureus. The producers believe that if the larger proportion of the bacteria and the more virulent forms are eliminated the others will not be dangerous. It cannot be denied that the tetanus bacillus has been found in vaccine lymph on one occasion and it is probable that it has been present more often. Drs. MacFarland and Wilson, of Philadelphia, came to the conclusion that this was due to poor technique. In well conducted vaccine stables the feces of animals are examined for the tetanus bacillus, and its absence must be proven before the animal is admitted to the stable. It would appear logical to use the anti-streptococci serum in smallpox, where, if used early, it would be rather a preventive, in which capacity all the anti-serums act best.

Dr. ROONEY wished to report a method of vaccination which he had used in over 600 cases. This method is to paint some collodion over the skin and to vaccinate through the collodion, after which the wound is sealed with sterilized cotton soaked in collodion, and at times this is covered with a piece of gauze and adhesive plaster. The results of the employment of this method have always been most satisfactory.

He wished to ask an explanation for the fact that in certain typical cases of vaccination seen by him no scar had resulted, even though the take was typical.

Dr. LANAHAN wished to report two cases which he had vaccinated last year, in which about a week after the take both children developed typical chickenpox.

Dr. WILTSE called attention to auto-vaccination, which sometimes occurs in children, and he referred to some cases of this kind which he had seen. In one instance the mother vaccinated herself while taking care of the vaccination of her child. The lesion in her case was located over one of the condyles of the femur and was perfectly typical. In differential diagnosis between smallpox and chickenpox he wished to emphasize the fact that the lesions of chickenpox occur in crops, while the lesions of smallpox are synchronous.

Dr. CURTIS in closing the discussion, stated that if the President said that it was not necessary to wash the arm before vaccination it was not, for ex cathedra utterances could not be disputed. He felt that in ordinary cases antisepsis probably was not necessary, but in cases where it is omitted infections do now and then occur. He did not believe it necessary to use strong antiseptics to sterilize the skin.

Regarding isolation he felt that but little was known as to the distance to which smallpox may be carried by the wind. He believed that disinfection is often carried to an excess and that there was too extravagant destruction of material in houses where the disease has prevailed. He believed that the free course of wind through a house will disinfect it in three days. He referred to the only vaccine establishment ever carried on in Albany, which was one by a certain doctor who collected scabs with great care and dispensed them.

Dr. CRAIG in closing the discussion referred to the use of the term varioloid, which was most deceptive to the mind of the laity, and he felt that the term was a bad one and should be dropped entirely and stated that it was never used by members of the Board of Health of this city.

Regarding the technique of vaccination he believed that there was a difference between the theoretical and the practical side. He believed that the vaccination site should never be near a large underlying vein, and for this reason he did not believe in vaccinating over the internal condyle of the femur because of the proximity of the long saphenous vein. He referred to the child of a negro woman who was vaccinated on the sixth or seventh day of life, a few days after which the child developed smallpox, which also developed in the mother.

Moved to adjourn, seconded, carried.

ARTHUR W. ELTING, *Secretary*.

SAMUEL B. WARD, *President*.



## Medical News

Edited by Eugene E. Hinman, M. D.

ALBANY MEDICAL COLLEGE ALUMNI ASSOCIATION.—The thirtieth annual meeting of the Alumni Association of our college will be held in the college Tuesday, May 5, 1903. The following is the program as arranged:

9:30 A. M. Reception in library.

10:30 A. M. General Alumni meeting. Faculty address of welcome by Prof. Henry Hun, M. D. Reports of class historians. Miscellaneous business. President's address. Election of officers.

12:00 M. Reunion of decennial classes.

3 P. M. Commencement exercises at Odd Fellows' Hall. Address by Hon. John Cunneen, Attorney-General of the State of New York.

8:00 P. M. Alumni dinner at Hotel Ten Eyck.

The classes, '53, '63, '73, '83 and '93 will hold their reunions after the general alumni meeting and will have abundant time for the full reports of their historians and social intercourse.

COMMENCEMENT EXERCISES, ALBANY COLLEGE OF PHARMACY.—The twenty-second commencement exercises of the College of Pharmacy were held at Odd Fellows' Hall on the evening of March 31, 1903. Prayer was offered by Rev. C. H. French and Dr. Willis G. Tucker made an address of welcome, after which the degrees were conferred by Rev. Dr. Raymond, Chancellor of the University. The address to the class was made by Hon. D. Cady Herrick. After the conclusion of the exercises the graduates and their friends adjourned to the Ten Eyck, where a banquet was enjoyed. The annual election of officers resulted as follows: President, J. A. Lyons, of Yonkers; first vice-president, George C. Hogan, Albany; second vice-president, D. E. Connery, Greenwich; secretary, T. H. Bradley, Albany; treasurer, E. C. Hutman, Albany; historian, F. E. Richardson, Cambridge.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR.—STATISTICS FOR MARCH, 1903. Number of new cases, 52. *Classification of cases.* Dispensary patients receiving home care, 2; district cases reported by health physicians, 2; charity cases reported by other physicians, 24; total number of charity cases, 28. Patients with limited means, 24; old cases still under treatment, 27; total number of patients under nursing care, 89. *Classification of diseases, (new cases).* Medical, 24; surgical, 1; gynecological, 2; obstetrical, 14 mothers and 9 infants under professional care; dental, 1; eye and ear, 1. Number of contagious diseases on medical list, 5; deaths, 3.

*Special obstetrical department:* The head obstetrician in charge of cases. Medical students in attendance, 4; patients, 2 completed cases; (one patient still under care and two on the waiting list). All cases in charge of the Guild nurses. Number of visits by the obstetrician, 7; by medical students, 15; by Guild nurses, 34; total number of visits for this department, 56.

*Visits of Guild Nurses (all departments):* Number of visits with nursing treatment, 584; for professional supervision of convalescents, 230;



total for the month, 814. Four graduate nurses and four assistant nurses on duty. Cases were referred to the Guild by the city physician, by two of the health physicians, by twenty-four other physicians and by one dentist.

**IMPROVEMENTS AT ST. PETER'S HOSPITAL.**—The trustees of St. Peter's Hospital have had plans drawn for a four story and basement addition to the present hospital building, this addition to stand behind the hospital and to be connected with it by a corridor. The old building will also be improved in many particulars, the entire improvements to cost in the neighborhood of \$60,000. The hospital when renovated will compare very favorably with the modern general hospital both in its accommodations for patients and for clinical instruction.

**NURSES ALUMNÆ ASSOCIATION.**—The regular meeting of the Alumnæ of the Training School for Nurses of the Albany Hospital, was held at the hospital April 1, 1903. The chairman appointed a nominating committee to select officers for the ensuing term, consisting of Misses Keffer, A. Cummings, Lansing, J. Smith, Swartout, Cameron and Mrs. James LeGallez. The election will occur May 16th, and will be followed by a banquet.

**NURSES ASSOCIATION OF NORTHERN NEW YORK.**—This association held its annual election of officers during the latter part of March, electing the following for the ensuing year: President, Miss Ward; vice-president, Miss Lord; secretary, Miss Fraser; corresponding secretary, Miss Poole; treasurer, Miss Bull. The association is to incorporate and a committee was appointed to make the necessary preparations.

**RABIES DISCUSSED BEFORE YALE MEDICAL ALUMNI.**—During the last few months much has been said about the frequency of persons being bitten by so-called rabid dogs in our large cities. At a meeting of the Yale Medical Alumni three of the leading specialists of this country, Drs. Cabot, Gill and Wilson, read papers on the subject. The discussions, as well as the papers read, showed that a very large percentage of the profession favors the theory that hydrophobia is produced in man by the bite of a rabid dog.

**PROPHYLAXIS OF VENEREAL DISEASES.**—At the last meeting of the American Medical Association, held June 10-13, 1902, a joint resolution from the sections of Cutaneous Medicine and Surgery, and Hygiene and Sanitary Science, was introduced in the House of Delegates as follows:

"WHEREAS, There is a burning necessity to check the spread of venereal diseases, and, assuming that the states cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State Legislatures and municipalities means not regulamentative, but social, economic, educative and sanitary in their character, to diminish the danger from venereal diseases.

*Resolved*, That the section on Cutaneous Medicine and Surgery of the American Medical Association invite the section on Hygiene and Sanitary Science to co-operate with it in bringing about a propaganda in the different states, looking toward a proper recognition of the dangers from

venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of venereal diseases, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year at Brussels, under the authority of the Belgian Government." This was later submitted to the House of Delegates, which endorsed the action and a joint committee of six, from the sections named in the resolutions, was appointed to stimulate study in and uniform knowledge of the subject, also to present to the association a plan for a national meeting.

**AMERICAN UROLOGICAL ASSOCIATION.**—The American Urological Association, which meets the first Wednesday of each month, except July, August and September, will hold its annual meeting at New Orleans, May 8 and 9, 1903. This meeting immediately follows the meeting of the American Medical Association and the preliminary program promises about forty very interesting papers, covering nearly all the renal diseases, to be read by the leading specialists of the United States.

**AMERICAN MEDICAL EDITORS' ASSOCIATION.**—The American Association of Medical Editors, organized in 1869, will meet in annual session in New Orleans, May 4, 1903. Upon the membership roll are the names of many of our most prominent editors who will assemble to take part in the discussions upon topics of interest to every medical editor and journalist.

**DEPARTMENT OF PHOTO-THERAPY AND RADIOGRAPHY AT THE PHILADELPHIA POLYCLINIC.**—The Philadelphia Polyclinic has established a photo-therapeutic department and is prepared to treat patients with concentrated chemical rays of light and with the X-Rays. All of the various forms of light ray treatment will be at the command of the staff of the Polyclinic.

**MEDICAL CORPS OF THE NAVY.**—There is at present a demand for surgeons in the naval service. The last Congress provided for 150 new appointments, twenty-five to be made each year, and, as there are about ten vacancies occurring each year in the medical corps, this makes a total of about thirty-five yearly appointments for the next six years. The examining board is in continual session at Washington, D. C., and Mare Island, Cal., and any qualified physician who is a citizen of the United States may apply for an examination at any time.

**INTERNATIONAL CONGRESS OF HYGIENE AT BRUSSELS.**—The Eleventh International Congress of Hygiene and Demography will be held at Brussels from the 2nd to the 8th of September, 1903, under the patronage of the King, with Prince Albert of Belgium as honorary president. The Congress will be attended by leading physicians from this country and Europe.

**STATE NURSES' ASSOCIATION.**—The annual meeting of the New York State Association of Nurses convened April 21st in Humane Hall, Albany. Representatives were present from Buffalo, Rochester, Syracuse, Utica, and New York, in addition to the Albany contingent. Many matters of interest to the association were discussed and considerable enthusiasm was shown relative to Senator Armstrong's bill providing for the examina-

tion and registration of nurses in this State. After adjournment, many of the nurses were received by Governor Odell at the Executive Chamber.

CONTAGIOUS DISEASES ON RAILWAY TRAINS.—The Colorado Railways Association has adopted a rule that no invalids shall be allowed to enter trains in Colorado without a physician's certificate that the bearer is not suffering from any contagious disease. The intention is to protect passengers from infection by demanding a regular physician's certificate of health instead of depending upon the diagnostic ability of conductors and trainmen, as has been the custom for many years.

MICROBES AT THE POLE.—On May 15th, Dr. J. Charcot will head a very unusual expedition to the Polar regions. On that date he will sail from St. Malo, France, under the auspices of the Pasteur Institute and the Museum of Natural History of Paris, to study bacteriology in the Polar regions. A number of prominent investigators deny the existence of microbe life in the polar regions, and Dr. Charcot by making repeated analyses of air and water in the polar regions, as well as carefully examining the intestinal tracts of polar animals for the primary microbes which are found so abundantly in warm or temperate latitudes, will undoubtedly make many interesting discoveries and definitely settle the dispute.

A NEW ANGLO-AMERICAN HOSPITAL IN CAIRO.—Preparations are well under way for the establishment of an Anglo-American Hospital in the principal city of Egypt. This is to be under the supervision of an Anglo-American board and to be run on principles laid down for the government of up-to-date modern hospitals. On the 4th of March a grand concert was given in that city under the auspices of Mr. Louis Lombard, of New York City, the proceeds to be devoted toward establishing the hospital.

PERSONAL.—Dr. HOWARD A. LAMOURE (A. M. C., 1900), has been transferred from the Craig Colony for Epileptics to the position of assistant physician in the Rome State Custodian Asylum.

—Dr. JARED BASSETT (A. M. C., 1839), has written a very cordial letter to the editor tendering his regards to the Alumni Association. Dr. Bassett was the first doctor to receive a diploma from the Albany Medical College and still enjoys fair health at the age of 90.

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## Book Reviews

*The Diseases of Infancy and Childhood*, for the use of Students and Practitioners of Medicine, by L. EMMETT HOLT, A. M., M. D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York; Attending Physician to the Babies' and Foundling Hospitals, New York; Consulting Physician to the New York Infant Asylum, Lying-In Hospital, Orthopedic, and Hospital for the Ruptured and Crippled. Second Edition, Revised and Enlarged. Pages 1161. New York. D. Appleton & Co., 1902.

A lengthy review of the first edition of this book appeared in the

ANNALS in May, 1897. This work was very popular, and the second edition has been expected for some time and is well worth the waiting.

Disease as manifested in children differs from that in older life. The medical profession is now beginning to realize that the infant is not a small edition of the adult and the demand for special pediatric literature has been responsible for a large assortment of text books. Holt's Diseases of Infancy and Childhood has been one of the most useful and helpful of these and it is fully up to date in the present edition and shows evidence of careful and painstaking revision.

The same general plan is followed as in the first edition and it contains fifty more pages, two new colored plates, and twenty-one new illustrations, besides many temperature and weight charts. The author states in the introduction that many of the chapters have been entirely rewritten. The sections on Nutrition and on Diseases of the Digestive System contain fifty more pages and much of the material in these sections is new. The value of milk laboratories is discussed at greater length and Dr. Holt warmly endorses them after an experience of over eight years.

The method proposed for the home modification of milk is much simpler than that outlined in the first edition. The technique of procuring various strengths of top milk is described. With a known percentage of top milk three series of formulas can be obtained and each series can be subdivided on a percentage basis so as to agree with the digestive powers of any infant. Dr. Holt has taken advantage of the advances made in infant feeding and has clearly demonstrated a simple, scientific, and accurate method of feeding bottle babies.

No better example of the thoroughness with which this edition has been revised can be found than the chapter on scurvy. Two more pages are devoted to its consideration and new paragraphs are added to describe the pathological lesions and its association with rickets. It is interesting to note that Dr. Holt is now fully convinced that sterilized milk is one of the chief etiologic factors.

It is rather unfortunate that the paragraph on treatment of tuberculous peritonitis was left unchanged. For the past few years there has been quite a reaction against surgical treatment as a routine measure, even among surgeons, and it has been shown that just as many, if not more, cases have been permanently cured under purely medical treatment.

In the review of the first edition comment was made that in the symptomatology of tetany no mention appeared of the increased electrical excitability of the muscles or of Chvostek's facial phenomenon. These symptoms are described in the second edition.

The past five years have proved without doubt the value of antitoxin in the treatment of diphtheria. In the old edition 3,000 units were recommended for exceptional cases of great severity. A dose of from 8,000 to 10,000 units is now advised for these cases and this should be repeated in from six to eight hours if necessary.

Amoebic Colitis has been added to the chapter on Diseases of the Intestines. The section on Diseases of the Blood has been enlarged and a chapter added on Leucocytosis.



It is gratifying to note that Dr. Holt refers to articles which have appeared in the *ANNALS*.

The revision makes this work the peer of pediatric text books, and it is destined to take the position in American medical literature that the classical work of Henock occupies in Germany—that of the recognized authority in Pediatrics.

H. L. K. S.

*Work Book in Surgery*.—Comprising the Principles of General Surgery and Surgical Procedure, by LUZERNE COVILLE, M. D., Lecturer on Surgery, Cornell University, Medical College, at Ithaca, N. Y. Privately printed, Ithaca, N. Y., 1902.

This interesting volume comprising 294 pages, is subdivided into three general parts.

I. Surgical pathology.

II. Surgical operation.

III. Surgical dressing.

Surgical pathology very properly occupies about four-fifths of the subject matter and is subdivided into (1) Inflammations, in which the main features of the condition, with a brief reference to the rôle played by bacteria are presented. (2) Surgical diseases, under which heading lymphangitis, erysipelas, septicaemia, gonorrhea, syphilis, tuberculosis, etc., are discussed. (3) Injuries and diseases of soft parts, which forms an exceedingly practical and useful chapter, and in which reference is made to practically all disturbances of these tissues which are of any importance.

IV. Injuries and diseases of bones.

V. Injuries and diseases of joints.

VI. Tumors. In this section of the volume especial emphasis is laid upon the most important features of the pathology and symptomatology, with rather brief, but as a rule, adequate reference to the treatment. The aim of the author has evidently been to present a brief word picture of the essential features of those surgical diseases with which the student and the general practitioner should be familiar. The discussion of the diseases is systematic and terse, the etiology, pathology, diagnosis, prognosis and treatment being considered separately.

"Surgical Operation" occupies a comparatively small portion of the volume, but in it the general principles of surgical procedure are presented, with sufficient detail for all practical purposes. Under this heading is a brief discussion of the X-Ray, and the important relationship it bears to modern surgery. Under the heading of "Surgical Dressing" the author discusses the various solutions used in surgery, with a brief reference to the advantages possessed by each. the remainder of the chapter being devoted to powders, ligatures, dressings and apparatus in general.

There are no references to the literature, nor is any space wasted in presenting arguments for or against certain treatments and methods, with the result that both time and space are economized.

The arrangement of the subject matter is very satisfactory, and the typographical work excellent. The volume should prove of great value to the student as well as to the general practitioner of medicine, who is concerned with the minor phases of surgery and who constantly stands in need of a handy book of reference. Most modern works on surgery are far too voluminous for the average student, and hence it would seem that such a volume as this would supply a decided need.

A. W. E.

## Current Medical Literature

## PSYCHIATRY

Edited by G. Alder Blumer, M. D.

*Post-Operative Insanity. (Ueber postoperatives Irresein.)*ALEX. PILCZ. *Wiener Klinische Wochenschrift*, 1902, No. 36.

Psychoses following operations are comparatively rare: at Edinburgh eleven cases only are reported in 5,500 operations; Kelly has seen eight following 2,000 laparotomies; Segond, four, in 642 gynecological operations; Schnabel, one, following a cataract extraction, and in the Innsbruck Klinik there have been twelve in 183 operations. It is difficult to differentiate cases solely due to operation from those in which there has been sufficient antecedent cause upon which the psychosis might develop independently of the operation, and this predisposing ætiology has not been fully worked out. Alcoholism is a factor, but symptoms identical with delirium tremens have been described in Dupuytren's delirium nervosum and traumaticum. Sudden abstinence or an intercurrent fever due to the operation may produce the same symptoms, and the operation itself with the necessary poisons used, as chloroform or iodoform, may induce analogous symptoms, so that typical delirium tremens in the truest sense is not to be regarded as a post-operative affection. Senile psychoses appear after operations, and sex offers a potent predisposition. The author found in 306 cases, 206 of which were women, that there were 128 gynecological cases. In children the condition is rare, as Broca found no cases in 8,990 operations, except transitory febrile delirium and two cases of iodoform intoxication. Dent reports a case of hallucinatory confusion of a month's duration in a child of ten, following an operation upon the knee joint. Mental degenerations, defective heredity, the general state of the organism before the operation, are all to be considered, as, for instance, condition of shock, the cachexia of malignancy, suppurations, inanition, diseases of the gastro-intestinal tract, of the kidneys, etc. Another class of cases is comprehended under certain mental states, such as fear, apprehension of the operation and hysteria.

All forms of operations have been recorded in this category, from the simplest to the most serious, as extraction of teeth, rhinoplastic procedures, ligation of aneurism, amputations, resections, trephining, circumcision, the introduction of a speculum, hernias, etc. In 320 cases, 128 were gynecological; 64 operations on the eye; 24 herniotomies; 21 operations on the male genitals; 54 various, and 29 gave no particulars.

There is no particular type of post-operative psychosis. Confusional insanity, acute delirium, and Korsakoff's psychosis are prominent. Prolonged melancholy has been occasionally seen and mental dullness. The psychosis usually develops gradually, and there is often a fairly long interval between the operation and the appearance of the mental symptoms. The prognosis depends upon the form and special ætiological factors, as sepsis or uræmia. Chronic mental impairment is rare.

*The Condition of the Spinal Cord in Pulmonary Tuberculosis during Mental Disease. (Zum Verhalten des Rückenmarks bei der Lungentuberculose der Geisteskranken.)*

RANSOHOFF. *Monatsschrift für Psychiatrie und Neurologie*, February, 1902.

The writer has found very little literature upon this subject, though there have been numerous contributions upon the condition of the spinal cord in infections, among which anæmia is included. His examinations were made upon eleven consecutive cases which came to autopsy in the institution at Hördt, to which he added two cases of a former observation.

The conclusions derived from these examinations are summarized as follows:

1. The white substance of the spinal cord, especially the long tracts, suffers injury frequently in cases of tuberculous affections of the lungs, which in the beginning is revealed by Marchi degeneration only, and later by destruction, proliferation of cellular nuclei and increase of the neuroglia.
2. Cases running a rapid course of tuberculosis, due to mixed infection, are particularly predisposed to this disease.
3. The disease in the posterior columns is most pronounced in the cervical cord, and in the pyramidal tracts in the lumbar cord. The extramedullary portions of the roots are never attacked.
4. Hydrops of the cord is not an infrequent affection in phthisis, but has no connection with the customary degeneration.

*Katatonie. (Zur Kasuistik der Katatonie.)*

KARL KAHLBAUM. *Monatsschrift für Psychiatrie und Neurologie*, July, 1902, Band xii, Heft 1.

In 1874 this psychosis was described by Kahlbaum, who showed the association in certain cases of melancholia, mania and stupor, and numerous contributions have since been made, in which the clinical manifestations have been amplified, and the question as to the existence of the disease entity has been discussed. The writer states the thesis in the following two questions:

1. Is there a distinct disease, katatonie, which is sharply differentiated and to be compared with dementia paralytica?
2. Is the prognosis of a given case to be regarded as hopeless when outspoken katatonic symptoms are manifested?

He has summarized twenty-seven cases from the Frankfort Asylum, and which, independently of their course, have shown negativism, stereotypy, verbigeration, catalepsy, automatism and suggestibility.

Heredity is apparent in about fifty per cent. of the cases, either direct, or, more generally, showing some nervous taint. In the prognosis the hereditary influence did not predominate. Over eighty per cent. of the cases were under thirty years of age, and fifty-five was the greatest age. One case of advanced age recovered. There were sixty-five per cent. women, and thirty-five per cent. men.



The writer gives a somewhat extended dissertation on the occupation as a predisposing or exciting factor, but the statistics are not definite, as the patients in different institutions, public and private, show differing conditions of life. The writer suggests the change of occupation from a simple one to an occupation requiring mental action, as an element in this as in other forms of mental disorder. Thus, the peasant girl, who is transferred to domestic life in a city, and is thus subjected to changes in air, in food, in exercise, in associations, with coincident menstrual disturbances or chlorosis, is liable to a strain which may result in a mental break-down. Onanism is discussed, but here, as in dementia paralytica, it is difficult to say whether this is a cause or an early symptom of the disease. In nearly one-third of the cases in women the outbreak of the disease bore some relation to menstruation and the puerperium; abortion was noted in several cases. Infectious processes were also noted in a few cases, epidemic influenza among others. Several cases had an acute inception, once or twice of a few days; in others the early periods were prolonged. In spite of these differences in the prodromal stages the cases revealed the classic symptoms, pathognomic of the disease. One-eighth of the cases terminated in complete recovery. In one case the patient so far recovered as to be able to follow his occupation with entire success, but remained mute. The author believes that the patients actually recover, and that renewals of the symptoms are new attacks, the interval not being regarded as a remission.

He lays especial emphasis upon Kraepelin's interpretation of katatonia as one of the forms of dementia præcox, but does not give the almost invariably unfavorable prognosis which this interpretation involves. He feels that he has answered the two important questions with which he started his contribution, and calls attention to the fact that many cases reported as katatonia by various writers have not presented all of the symptoms. Katatonia may be regarded, when properly diagnosed, as a distinct disease, of which the prognosis is not always unfavorable.

*A Case of Korsakoff's Psychosis of Gastro-Intestinal Origin. (Ein Fall von Cerebropathia psychica toxæmica [Korsakoff], gastro-intestinalen Ursprnges.)*

EMIL RAIMANN. *Monatsschrift für Psychiatrie und Neurologie*, October, 1902, Band xii, Heft 4.

Gastro-intestinal autointoxication is an important factor in the ætiology of psychoses, which v. Wagner has exploited. Raimann cites a case which presented the peculiar features of Korsakoff's psychosis, motor and sensory disturbance with weakness and mental disorder characterized by loss of memory, marked weakness and fantasy, from which there was an opportunity to exclude absolutely any suspicion of alcoholism. The anatomical diagnosis was polioencephalitis superior acuta, Korsakoff's psychosis and degenerative myocarditis, which was modified at the autopsy by certain abdominal conditions, pointing to chronic catarrh with coprostasis and degeneration of the mesenteric and intestinal lymph glands. Numerous cases of polioencephalitis are discussed in which alcoholism did not appear in the ætiology, the causes having been sulphuric acid poisoning, influenza, sep-



ticæmia and others, where, however, it has not been possible to establish the presence of bacteria in the cerebral tissues, and the bacterial toxins have been assumed as the cause of the inflammation. Chronic alcoholism is a different disease, but polioencephalitis and Strümpell's encephalopolioencephalitis, as Wernicke's polioencephalitis and Strümpell's encephalitis, probably do not differ. The symptoms of Korsakoff's psychosis appear when no history of alcoholism is available, and cases have been reported following pyæmia due to pelvic abscess, icterus with fever, typhoid, puerperal parametritis, influenza, cerebro-spinal meningitis, and chronic rheumatic nephritis. The author desires to add his case of auto-intoxication to this list. It is agreed that alcohol itself is not the cause of the symptoms of Korsakoff's psychosis, but the poisons which are secondarily developed in the system. Korsakoff himself cited a case in which intestinal impaction was the source. The author's case was a combination of polioencephalitis and Korsakoff's psychosis, due to intestinal absorption and entirely independent of alcoholism. It is of interest that the predisposing factors to the intestinal derangement may be varied, and that influenza and other bacterial affections may result in the production of poisons similar in action to those induced by alcohol, or that such poisons may develop from the intestine without the necessity of the introduction of poisons from without.

*Surgery in Lunatic Asylums. (La chirurgie dans les asiles d'aliénés).*

BAUDOUIN. *Gazette Médicale de Paris*, 26 July, 1902.

The recent works of Dr. Picqué, of Paris, have shown the great desirability of having connected with each lunatic asylum a section devoted to surgery; there is but one such in France, that of Sainte-Anne, under the direction of Dr. Picqué.

The Russians seem to want to have such surgical sections in their institutions for the relief of insanity. Dr. Poussèpe has lately raised the question in that country. According to him, there should be, in each large institution of the kind in question, a section devoted to surgery, having at its head a special surgeon, resident in the asylum, and a room for operations.

Dr. Poussèpe bases his proposition on the authority of Prof. Bechterew, who, in 1897, pointed out the extreme importance of operative intervention in many nervous and mental diseases, but the investigations of Dr. Picqué who has entirely cured such maladies by operating on a staphyloma and a cyst of the ovary, are still more demonstrative.

Cranial surgery is far from having said its last word. But it cannot be profitably undertaken, in view of the difficulties of its special technique, except by surgeons who devote all their energies to the study of it. In order that this science may progress, there must be patients upon whom to operate; and it is only in lunatic asylums that such patients can be found and properly examined.

The article concludes with the statement of which the following is as literal a translation as is at all fair to make: "It is essential that immediate action be taken, if we wish France to remain, in this respect, at the head of progress and of humanity."

## SURGERY

Edited by A. Vander Veer, M. D.

*Surgical Treatment of Diseases of the Lung. (Die chirurgische Behandlung der Lungenkrankheiten.)*

GARRE. *Mitteilungen aus den Grenzgebieten der Medicin und Chirurgie, Bd. IX., Hft. III.*

The writer begins with a discussion of the importance of pleural adhesions in the surgical diseases of the lungs and shows that, according to statistics such adhesions appear to exist in about 87% of the cases. Their absence is, however, not necessarily a contradiction to operation. The pathology of pneumothorax is discussed and from recent experimental work it has been proven that only when the pleural opening is larger than the glottis is pneumothorax in the course of an operation apt to result fatally. It has furthermore been shown that the movement of the mediastinum from side to side rather than the displacement of the heart is the cause of death. Careful suture or tamponade of the pleura usually prevents general infection of the pleural cavity if adhesions do not exist.

The pulmonary conditions amenable to surgical treatment are enumerated: Tuberculosis, Actinomycosis, Abscess, Gangrene, Bronchiectasis, Echinococcus, Neoplasms.

The technique of operations upon the lungs is discussed in some detail. Chloroform is usually indicated, although in some instances local anæsthesia may be desirable. The operation divides itself into three stages. Thorakotomy, Pleurotomy, Pneumotomy. The incision should be a free one and at least two ribs should be resected.

The writer advises especially against simple puncture or incision of an intercostal space. If pleural adhesions are not present the pleural surfaces should be sutured or tamponed and the pneumotomy may be performed then or after a few days. The pleural cavity should always be opened slowly and cautiously. Pneumotomy is the most important part of the operation. Severe hemorrhage is rarely encountered at the periphery of the lung. The operation field should be a free one in order that any hemorrhage may be controlled. Puncture of the exposed lung with a needle is advisable where one is not sure of the exact location of the cavity. After opening the cavity, either with a knife or cautery, it should be carefully wiped out, and all necrotic tissue removed. Irrigation of a cavity of the lung is never to be performed. In cavities of long standing when the surrounding lung tissue is much indurated, the inner wall of the cavity should be dissected out with as much of the indurated tissue as possible; dense pleural adhesion should be removed and a more or less extensive resection of the ribs should be done in order to afford the cavity every possible opportunity to close. Secondary hemorrhage is one of the dangers following pneumotomy and when the vessel cannot be caught with forceps tamponade should be resorted to.

The results of operative treatment of pulmonary tuberculosis are not especially encouraging. Of 47 cases reported, 26 were more or less improved, while 19 died. The writer refers to the results of the induction

of an artificial pneumothorax with nitrogen as recommended by Murphy. The object of this being to put the lung at rest and thus encourage healing of the process as in the treatment of bone and joint tuberculosis. In five of seven cases in which this procedure was practised by Murphy considerable improvement resulted. If a simple, localized, tuberculous focus presents in the lung of a patient in good condition, the writer states:

(1) That free incision and drainage of a cavity is to be practised if there is an accumulation of secretion with secondary infection. (2) Free exposure and resection of the diseased lung is to be advised in cases with isolated cavities or foci in the lower lobes. (3) Mobilisation of the thorax and pleura is to be attempted in single cavities of the apex.

Eight cases of actinomycosis of the lung treated surgically have been reported with good results.

The writer has collected 96 cases of abscess of the lung treated surgically of which 80% recovered and 20% died. The prognosis depends in part upon the etiology and in part upon the earliness of operation. The prognosis in pulmonary gangrene is less favorable. Of 122 cases collected by the writer, 66% recovered and 34% died. When, however, this is compared with the mortality of 75% to 80% in cases treated medically, the results are not so unfavorable.

The results of operative treatment of bronchiectasis are not especially brilliant. Of 57 cases collected by the writer 60% recovered and 40% died, but of the 60% recovered not more than one-half were permanently cured, the other half having either fistulæ, bronchitis or some bronchiectasis. The writer advises free incision and careful exploration of the lung in these cases.

In the treatment of echimococcus disease of the lung the results of operation have been most excellent. Of 79 cases collected from the literature, 90% recovered and 10% died.

A general résumé of the subject shows that of about 400 cases of pneumotomy for the conditions mentioned there have been approximately 300 recoveries and 100 deaths.

*Botryomycosis. (La botryomycose.)*

SAVARIAUD and DEGUY. *Gazette des Hopitaux*, No. 115, 1902.

*(Botryomycose: Nouvelles Observations.)*

DOLORE. *Gazette des Hopitaux*, No. 122, 1902.

This peculiar condition has been described in man only during the last four or five years, it having been first observed by the French physicians Poncet and Dor. As long ago as 1870 Bollinger described in horses a disease similar in character. In these animals the lesion usually occurs in castration wounds. In man there is very little to be said regarding the predisposing causes, except that the characteristic lesion nearly always appears in connection with wounds, especially wounds of the palmar surface of the hands. There is nothing characteristic about the history of the patient either as regards their occupation or their condition in life.

The lesion begins as a small wart-like elevation generally appearing



either at one edge of a healing wound or in the cicatrix of a wound. The surface of this elevation is covered by skin at first, but usually ulceration soon takes place, and the nodule has the appearance of a circular area of granulation tissue. The nodule gradually increases in size, so that after some months it may have reached a diameter of five centimetres. As it grows the form modifies. A pedicle gradually forms which remains covered by healthy skin until finally the tumor assumes the typical appearance which is described as that of a mushroom. The surface of the tumor is covered by very vascular granulations, which bleed quite easily, so that hemorrhages very commonly occur. The consistency of the growth is rather soft at first, but as the disease becomes chronic the consistency increases considerably.

The early writers do not say much about the diagnostic features of the disease, as they seem to regard the lesions as so characteristic that it is hardly possible to make a mistake. It would seem, however, that ulcerating papillomata might be confounded with this disease, as might also redundant granulation tissue, though this would not be likely to be pedunculated. The course of the disease varies in different cases; sometimes it develops very rapidly, in other cases the development goes on over several months. It is impossible to state what the termination is as all the cases so far reported have been treated surgically.

In regard to the treatment it is necessary to state that if a cauterization is done it must be very thorough, and a complete excision seems to be preferable.

In regard to the pathological anatomy of these tumors they are found on section to vary in firmness according to age, the older growths being much harder than the recent ones. Generally the base on the tumor and the pedicle are much harder than the superficial portions.

Microscopic examination of these tumors shows that they are made up essentially of granulation tissue rich in new blood vessels, and showing a marked tendency to fibrous transformation in the deeper portions. In the superficial portions there are found rounded masses, which have very much the appearance of the round masses which are found in actinomycosis, but which are made up of cocci.

Regarding the bacteriology of the condition there is still a good deal of dispute. Two views are held concerning it: An organism has been isolated from the majority of cases which very closely resembles the staphylococcus pyogenes aureus. One group of observers hold that this organism is in fact the staphylococcus pyogenes aureus somewhat modified by sojourn in the horse. These writers regard botryomycosis as merely a peculiar form of chronic inflammation. Other observers claim that the organism which has been isolated in these cases differs materially from the staphylococcus pyogenes aureus. Parascandolo, for example, claims that the two organisms grow differently upon gelatin, and furthermore states that it is possible to differentiate them, both by sero-diagnosis and by means of immunization experiments. Whichever view of the case ultimately turns out to be correct, it is certain that there exists a peculiar form of granulation tumor having definite clinical characteristics, to which the name "botryomycosis" has been given.



*Contribution to the Subject of the Roth-Bernhardt Meralgia and its Operative Treatment. (Beitrag zur Kenntniss des Roth-Bernhardt'schen Meralgie und ihrer operativen Behandlung.)*

E. NEISSER and C. POLLACK. *Mitteilungen aus den Grenzgebieten der Medicin und Chirurgie, Bd. 10, Hft. 3 and 4.*

Typical cases of meralgia are characterized by anæsthesia, paræsthesia, and pain in the region of the external femoral cutaneous nerve. The peculiarity of these symptoms is that they occur only during standing or walking and cease completely during rest. Roth expressed the view that only this nerve was involved, but later observers have found that at times certain other branches of the femoral nerve are affected. Roth concludes from his studies that the external femoral cutaneous nerve was especially exposed at certain points in its course to stretching and compression, to which circulatory and inflammatory disturbances of the nerve might be added. The four places where the nerve was most likely to be disturbed were:

- (1) The point of exit behind the psoas muscle.
- (2) Just below the anterior superior spine where the nerve is normally flattened.
- (3) The fibrous canal in the fascia lata through which the nerve runs.
- (4) The point of exit from this canal.

Dopter believes that contraction of the iliacus muscle produced circulatory disturbances in the nerve which were responsible for the symptoms.

Bernhardt believed the condition to be an infectious or toxic neuritis. Brisard believed it to be an ordinary peripheral neuritis. It has, however, never been possible to demonstrate, histologically, any evidence of neuritis in the pieces of nerve which have been excised.

In most of the cases reported the meralgia would appear to be of mechanico-irritative origin. The relation of meralgia to flat foot would also speak for this.

The writers report the case of a young man of eighteen, strong and healthy, who complained of severe pain in the left thigh and slight pain in the right thigh, which occurred when the patient attempted to walk after having been quiet for a time. This pain would disappear after the patient had walked some distance. Standing for a considerable time in certain positions would also cause the pain, which would always disappear when he lay down. Most of the outside as well as the middle of the front of the thigh presented decided disturbances of sensation. There was sensitiveness on pressure over the femoral nerve just below Poupart's ligament. Medical and local treatment having failed, an operation was resorted to, which consisted in exposure of the femoral nerve beneath and below Poupart's ligament. The nerve was found to be compressed by the sharp edge of the ligament, which was incised. The nerve appeared perfectly normal to the naked eye. The result was almost complete relief from the pain immediately after the operation and gradual restoration of the sensation during the succeeding months. This case the writers believe points to the mechanico-irritative origin of meralgia.

*Multiple Hereditary Exostoses. (Ueber Multiple Hereditäre Exostosen.)*  
ZUNGMAN. *Berliner klinische Wochenschrift*, September 22, 1902.

The author reports three cases of this strange and interesting condition, occurring in one family.

*Case 1.* This case happened in a boy aged nine, whose father and younger sister were similarly affected. The disease began at the age of four. The bones of the face were not affected, but the long bones of the extremities as well as the ribs were involved, in a symmetrical manner, by hard bone-like tumors, varying in size from a plum-pit to that of a walnut. These protuberances arose from a broad base and were often made up of several stalactite forms fused together. The clavicles and scapulæ were involved with similar exostoses. There was a scoliosis of the lumbar vertebræ toward the left. This deformity was due to a higher position of the right side of the pelvis. There was a varus position of the left elbow joint, due to a dislocation of the radius from an exostosis; also a valgus position of the left hand.

*Case 2.* Male, aged thirty-six, father of case 1. He was well built and presented a single exostosis at the end of the left radius. Otherwise the upper extremities were free. On the median side of the lower end of the right femur, is a bony growth, the size of a walnut. A growth of the same character occupies a similar position on the opposite side. At the upper end of each tibia, two exostoses exist. A number of bony tumors are observed toward the end of the right tibia. A small exostosis exists at the lower and posterior surface of the right fibula.

*Case 3.* Girl, six years old, sister of case 1, was well built for her age. The upper extremities were free, save the metacarpal bone of the left little finger which showed a small exostosis. The left fifth rib showed a distinct bony tumor. Many other ribs presented irregular bony elevations. The lower extremities were symmetrical in build and in length. The lower and inner side of the right femur showed a slightly movable exostosis. Below the right patella as well as above the right internal malleolus, were many bony protuberances. Symmetrically placed above the left internal malleolus, a small growth was found. It is interesting that the paternal grandfather, as well as an aunt, had suffered with similar though not as extensive exostosis.

The disease is interesting, apart from its rarity, because of the very gradual development of the exostoses, unattended with pain, discomfort or other inconvenience; their symmetrical distribution; their occasional movability; the fact that occasionally they, after a number of years, were absorbed; their hereditary nature, several cases occurring in a single family; and the fact that they are rarely congenital, most cases developing a few years after birth.

#### PATHOLOGY

Edited by George Blumer, M. D.

*Glycogen in the Blood, the Hæmatopoietic Glands, Exudates, and Infectious Foci. (Le Glycogène dans le Sang, les Organes Hématopoïétiques, les Exsudats et les Foyers Infectieux.)*

MAURICE LOEPER. *Archives de Médecine Expérimentale*, Tome XIV, No. 5, 1902.

The author has investigated the presence of glycogen in the blood under normal circumstances, and also in various infections. He also examined the blood-making organs, and various forms of pathological exudates for the presence of this substance. In normal blood the amount of glycogen is so small that it can hardly be estimated. In abnormal blood an increase in glycogen is found to be always associated with an increase in leucocytes, no matter what the cause of this may be. The glycogen is found almost exclusively in the polynuclear leucocytes, although it may be found occasionally in the lymphocytes. In the lymph, glycogen does not exist in the cellular elements, even during digestion, under normal circumstances. In cases of infection, however, small foci of glycogen can be found in the lymphoid cells. In various exudates glycogen was found always associated with the cells. Just as soon as the exudate contains polynuclear leucocytes glycogen begins to appear, and microscopical examination showed that it was present in the polynuclears in most instances. Occasionally, however, it occurred in the lymphocytes.

The author concludes that the increase in glycogen under these varying conditions is due to hyper-formation simply as a result of undue activity of the organs normally secreting it. The glycogen is not confined to the polynuclears, but may be seen in lymphocytes and in various cells in the hematopoietic organs. It does not seem to the writer that it is possible to draw diagnostic indications as to the nature of an exudate or an infectious focus from the examination of cells for glycogen. As he points out, the cells are generally polynuclear leucocytes, and this may be the case even in a tuberculous exudate.

*An Experimental Study on the Reimplantation of the Cranial Button After Trephining in the Dog and the Rabbit. (Etude Expérimentale sur la Réimplantation de la Rondelle Crânienne après la Trépanation chez le Chien et le Lapin.)*

V. CORNIL and P. COUDRAY. *Archives de Médecine Expérimentale*, Tome XIV, No. 5, 1902.

The authors of this paper give a long discussion, including historical considerations, regarding the question of what becomes of a button of bone which is removed by trephining if it is replaced in the opening. They give at length a number of experiments which they performed upon dogs and rabbits to determine the fate of the reimplanted button, and conclude as a result of their experiments that a double process takes place. During the first days after the reimplantation the cells and nuclei in the button degenerate and disappear rapidly. Following this the button is absorbed by lacunæ filled with connective tissue, and which contains giant cells. The complete absorption is slow and lasts for more than three months. At the same time that the absorption is going on a new formation of bone appears, this new formation taking place from the connective tissue springing from the medullary cavity of the bone surrounding the trephine opening, and also from the surface of the dura mater. The new formation of bone begins as early as the seventh day after reimplantation. At the end of twenty-six days ossification is far advanced. The new bone does not always completely replace the old bone, or at any rate the new



bone is not always as thick as the old bone. The authors disagree with some of the previous conclusions as to the method of regeneration of the skull, particularly with regard to the fate of the reimplanted button.

### ORTHOPEDIC SURGERY

Edited by Arthur W. Elting, M.-D.

*The Final Results of the Bloodless Treatment of Congenital Dislocation of the Hip. (Die Endresultate der unblutigen Behandlung der angeborenen Hüftluxation.)*

P. REDARD. *Zeitschrift für orthopädische Chirurgie, Bd. X., Hft. I, 1902.*

The writer's statistics are based upon fifty cases which have been operated upon during the past four years. Forty-three were cases of unilateral dislocation, while 7 were bilateral. Of the 43 cases a true anatomical reduction was obtained in 14. Ten of these 14 cases were under 7 years of age, and under 7 years more than half of the cases can be anatomically reduced by the bloodless method. The bloodless operation upon individuals over 7 years of age is difficult, and the results less satisfactory, most of the results being transpositions, while in some relaxation occurs. The question of age thus has a most important bearing on the prognosis. The writer advises careful preliminary study of the cases with the X-ray to determine the anatomical conditions and the best position in which to put the leg up.

Of the 43 unilateral cases a transposition of the head resulted in 26, and in 3 relaxation occurred, and in 2 of these a second operation resulted in a satisfactory transposition.

Of the 7 bilateral cases, 2 resulted in true reduction, 1 in reduction on one side and transposition on the other, and in the other 4, transposition of both sides resulted.

No accidents attended the operations and a hæmatoma of the upper part of the thigh was the most serious complication. The fractures and paralysis reported by some writers as following bloodless reduction are due to too vigorous attempts at reduction in older individuals. The bloodless method is not to be practised upon older individuals with considerable displacement of the head. In 8 of the unilateral cases the functional result was practically perfect, while in 30 it was very satisfactory.

In general one can say that good functional results attend a true reduction in young individuals. In 17 of the cases in which merely a transposition was effected, the functional result was excellent. The writer does not use the Lorenz screw or the Schede apparatus to draw the head down at the time of operation, but advises a preliminary extension with from 10 to 15 pounds of weight in those cases in which there is much shortening and displacement of the head. In mild cases the writer simply makes traction on the leg flexed at right angles to the pelvis and abducts the leg at the same time pressing the head toward the acetabulum by manipulation of the trochanter. Occasionally the closed fist is placed behind the trochanter and is utilized as a fulcrum.

After reduction the leg is held in more or less of an abducted position with external or internal rotation depending upon the case and a plaster dressing is applied. The writer in his later cases has shortened very



materially the period of immobilization. In certain cases the first dressing is done at the end of one or two months and further immobilization is continued for only two months. In conclusion the writer states that the bloodless method produces a complete cure of many cases of congenital dislocation of the hip. The function is greatly improved, and it is the operation of choice in all children under seven years of age.

*Extirpation and Regeneration of the Long Bones in Osteomyelitis and Tuberculosis. (Ueber Extirpation und Regeneration langer Rohrenknochen bei Osteomyelitis und Tuberculose.)*

FRITZ BERNDT. *Muenchener medizinische Wochenschrift*, No. 13, April 1, 1902.

In contradistinction to the view of Küster that osteomyelitis rarely begins in the medulla of the bone, the writer found that in all of his cases, about forty in number, the disease did begin in the medulla. The writer calls attention to a certain antagonism between osteomyelitis and tuberculosis in that the former is more apt to occur along the seashore while the latter seems to occur with more frequency inland.

In the treatment of osteomyelitis three operations are to be considered: (1) Simple incision. (2) Early exploration of the bone with the chisel and (3) Amputation. The second method is the most generally adopted, but in many instances it does not appear to suffice to allay the disease and not infrequently amputation has been resorted to. In the attempt to save, if possible, certain of these limbs, the writer has for the past four years attempted excision either of the whole bone or the diseased part of it in the hope of restoring to the individual a useful limb.

The literature of extirpation of bones in osteomyelitis is very scanty. Wilms in one case removed the entire diaphysis of the tibia and the bone regenerated without shortening, and Peterson extirpated an osteomyelitic clavicle which was regenerated. In certain cases of osteomyelitis in which after a free incision of the bone by means of the chisel the grave symptoms still persisted and when amputation seemed indicated, the writer has practised excision of the bones with excellent results. In one case the entire tibia with the exception of the lower epiphysis was excised and the bone regenerated, giving the patient a shortened, but useful leg. In another case the lower third of the femur as far as the epiphyseal line was excised and regeneration followed, while in still another case the upper epiphysis and the upper two-thirds of the diaphysis of the femur were excised and regeneration followed. In all these cases the limbs were useful, although more or less shortened.

In performing the operation great care should be exercised to preserve the periosteum for if this is destroyed the bone will of course not regenerate. In the after treatment one should bear in mind that regeneration of bone usually requires some foreign body stimulus. Gauze packing usually supplies this, although a variety of organic and inorganic substances may be substituted.

In three cases of extensive tuberculosis of the long bones the writer has practised extensive incision of the bones with preservation of the periosteum, and in all these cases regeneration of the bones has occurred.

# ALBANY MEDICAL ANNALS

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## Original Communications

### THE PREVENTION OF PUERPERAL ECLAMPSIA

By JOHN T. WHEELER, M. D.

CHATHAM, N. Y.

A very heavy weight of obligation rests upon the physician to diagnose renal insufficiency in the pregnant woman at an early stage of the disease, while it is not only possible but comparatively easy to protect her from the serious consequence of profound toxæmia.

The disease is not an obscure one in respect either of physical evidences or clinical symptoms, if the physician is on the lookout for them; to the patient and her friends, however, its early manifestations are not recognizable as danger signals, and quite too commonly the first intimation of the existence of the kidney affection is the convulsion that quickly precedes the fatal issue. So it comes about that the kidney disease of the pregnant woman has come, in practice, to be regarded from two different points of view. First, as a renal insufficiency, known only to the initiated, occurring in the dutiful patient of the wary obstetrician, recognized, in its early stages before intoxication has become portentous, and while time and opportunity offers to rescue the mother, and also the child, from impending peril.

Here the physician is free to apply the resources of his art in instituting a protracted, painstaking investigation of the woman's capacity for excretion; he makes frequent estimates of the elimination of urea, and other kidney waste, notes the

presence of kidney detritus, detects the first faint warnings of auto-intoxication, and employs such means for increasing elimination as the necessity of the case from time to time requires. In the great majority of instances, he will carry his patient to term and through confinement without resorting to vigorous measures; or, if the disease proves intractable, he may hasten delivery under conditions of his own choosing. Being forewarned, he is forearmed. His methods are highly scientific, and, if he finds his work laborious and exacting, he has success for a reward.

I know of only one considerable series of cases reported illustrating the success attained in preventing eclampsia by observing in a routine manner the perfection of excretion. These are given by Dr. E. P. Davis, of Philadelphia, and cover a period of six years. There were 1,566 patients, of these three had eclampsia. In neither case were the convulsions severe, and in each mother and child recovered. So much for the one point of view; now for the other.

In the other class of cases there has been no observation of the functional activity of the kidneys, and the woman is left to her fate. Insufficiency once begun has gone on unchecked; the toxins accumulating in the blood, slowly at first, and declaring themselves by symptoms obvious enough to the initiated, have acquired at length an overwhelming virulence; the excretory functions are paralyzed; and suddenly, in every third case, the catastrophe proclaims itself with all its appalling significance.

There is an ironical suitability in the designation of this class of cases by the name of the symptom that comes in order last of all before death comes. We call them cases of puerperal eclampsia. It is as though we had ignored pneumonia for a week and then named it the crisis.

If the physician can look back with complaisancy upon his successfully managed cases of renal insufficiency, he will look forward with as little satisfaction to his encounter with puerperal eclampsia, as to any experience in all his troubled life. That day, whatever else his plans may have been, he has his work cut out for him. It is no time now for nice determination of future risks and careful adaptations of measure of relief. There is instant demand for violent and heroic treatment, with the certain knowledge that the best result he can

hope for is, on the average, an even chance of saving the child and two chances out of three of saving the mother. Even he does not know that the doom of his patient was not sealed before the convulsion appeared. He will, if he follows the approved method of treatment, overwhelm his already semi-unconscious patient with anæsthetics and narcotics, to suppress the convulsions; he will depress her still more with veratrum viride; for purposes of elimination, he will bleed and sweat and purge, and ply her unresponsive kidneys with powerful diuretics; and finally, he will hasten her delivery by rapid mechanical violence. Such treatment is justified by necessity, but it carries with it an incalculable measure of injury.

It is not my purpose to consider treatment of eclampsia, nor indeed to go deeply into the technical details of renal sufficiency, but rather to bring these two classes of cases of one and the same disease in sharp antithesis, in order to study the peculiar circumstances and conditions which determine their grouping, and to see, if, out of this inquiry, we may find a way of striking a new line of cleavage between them, so that the tragedies in the one may be fewer in number, and the triumphs of the other more numerous.

Here are two stages of the same disease, the one recognized early, the other late; the mortality of the one, in such hands as Dr. Davis' is nil; that of the other,  $33\frac{1}{3}$  per cent. The treatment of the one, conservative, scientific, appealing to the humane instincts; the other, justified by dire necessity, but barbarous, unscientific, unprogressive, revolting. Except for the use of the saline solution, there has been no improvement in the treatment of eclampsia in thirty years, nor does there appear to be promise of improvement. Relief does not appear to lie in that direction.

The tendency of the disease to run on to a calamitous issue is well understood by us, the desirability of its early detection and treatment, is generally appreciated. Still the fact remains, that this acknowledged opprobrium of medicine is an almost constant quantity in our experience. I meet with it every year and so does every other medical man in general practice.

The constructive problem seems to be, seeing that eclampsia cannot be cured, but can be prevented when recognized early,



what more can be done than we are doing to make more general its early recognition? Ignorance of the nature of the disease on the part of the laity is the chief reason, among a number, why the pregnant woman goes on to her fate unprotected. There seems to be not the least bit of familiar acquaintance with the disease passing current among women, as there is in the case of most other diseases. It takes a trained observer to interpret the symptoms. Hence women too poor to call a doctor before confinement, furnish the largest percentage of cases of the advanced disease. The same ignorance operates to the disadvantage of women under professional observation. Also it makes them fatalists. They do not co-operate with the doctor in his investigations, as they would if they could understandingly observe the developing stage of the disease themselves, and could have their interest enlivened by a present sense of fear. It is the policy of the doctor commonly, not to permit his patient to be disturbed by unpleasant forebodings, and for these various reasons many a well-intended plan of routine observations miscarries. An intelligent, methodical patient will comply without question to the requirements of an adequate supervision, but in general, taking people as we find them, medical authority alone is not strong enough to invariably secure the necessary co-operation, because the woman does not herself sense its importance. She does not know that she is sitting on a powder keg with the betting one to sixty that it will explode. With this ignorance to blind her to danger, many trivial circumstances operate to her jeopardy. I saw a fatal case in Ghent last year where change of residence was the agency. The woman had recently moved from Troy; she did not wish to call a physician in Troy, because she knew another would have to attend her in Ghent. Her modesty probably cost her her life. Inaccessibility, as in the country with bad roads and bad weather, interferes with systematized inspection.

What now is the personal equation of the physician in the matter? It will be well if we ask ourselves with every case of eclampsia—whose fault is this? Our duty, as at present understood, is to prevent it, but we are not accountable for cases culminating outside our purview, nor when our efforts have been thwarted by the patient's negligence, although it would be greatly to our interest to lessen their number.

But can a man, whose time is fully occupied in general practice with its varied responsibilities and with the usual proportion of confinement cases, be expected to give that thorough supervision of every one of them throughout the last half of gestation that would be requisite to secure such a complete measure of prevention as Dr. Davis' series implies?

Are we never excusable for leaving a specimen of urine waiting for examination until it spoils? Considering how rapidly auto-intoxication sometimes fulminates, who can say just how frequently we should estimate the urea, instead of test for albumen?

Can we quite acquit ourselves of the imputation of too often trusting entirely to luck under the temptation of sixty chances to one against eclampsia, and 200 to one against a death from it? Is it not true, that the disposition to take one's chances is a very common practice, and that all of us occasionally, and many of us frequently, and some of us always, enter the lying-in chamber with no information whatever of the patient's kidney function? Can we claim at all that our conscience toward uræmia is as clear as the conscience of the surgeon is toward sepsis?

It has been proved by Dr. Davis, that, from methods comparable in thoroughness to those employed by the modern surgeon, equally brilliant results may be secured by the obstetrician, but as yet Dr. Davis' experience appears to be an isolated one. Evidently the family physician and the obstetrician do not now stand upon the same high plane with the votaries of aseptic surgery. Why should they not?

Having passed now in review the circumstances and conditions which create difficulties in the way of prevention of eclampsia, I offer these observations.

I consider it a radical error on the part of the profession to permit the laity to remain in ignorance of the nature and tendency of the kidney disease of pregnancy. Since they have no means of acquiring the acquaintance subjectively, the women should be taught it. They should be made to understand its insidious nature, and their own insecurity, and to emphasize the instruction by an object lesson, and to provide them with at least one obvious danger signal, they should be taught to examine their own urine at stated intervals for

albumen. They should have all the comfort that the absence of albumen under the circumstances would indicate, and feel all the concern which its presence might imply. They should make the test twice a week from the sixth month onward, and be ordered to notify us when the test ceases to be negative. It will not be claimed that a woman who knows when an egg is cooked cannot test for albumen.

To the objection that it will make the woman nervous, we may plead the higher need; to the objection that she will be careless, we may offer a "not proven." It would relieve us of much drudgery, which we do, or do not, perform, but it would not absolve us entirely from oversight.

If a familiarity of this kind with the test for albumen became general among women, so that it extended to the poorer classes, it would bestow the blessing of prevention upon the one class now utterly deprived of it, and otherwise utterly inaccessible. Its ultimate diffusion and adoption, as a general practice, is as possible as would be the interest now felt in maternal impressions, if that were new.

Finally, that it is practicable, I can offer an experience of many years. I began it twenty years ago, with a woman whose six successive pregnancies had ended in convulsions at from three to six months. I found supervision particularly irksome, because she began so early, and would develop a toxic explosion within three days. With the seventh pregnancy, she began the tests for herself in the second month, and continued them satisfactorily until the middle of the fifth month, when she got the warning which she well understood. After that I conducted the examinations. In this instance, if the woman had not made the daily examination herself, she would have miscarried again. Labor came on after a hot bath in the thirty-fifth week, and was normal, the child living.

I always teach my cases to make the test, if they reside at a distance, or are poor, or there are any other obstacles to personal supervision. I find the women do not neglect it, and they help to keep me up to the mark. I have known of the practice extending beyond my patients to their acquaintances, and have had women come to my office for test tubes whom I did not attend.

I am disposed to believe if the practice were encouraged by the profession, it would gain a foothold among the people,

although I dare say it might develop some abuses and limitations of usefulness.

I may say I am optimistic in regard to the growing interest in the profession concerning prevention, and I think the time is not far distant when we shall hold ourselves, and be held, responsible for the occurrence of any preventable eclamptic attack.

I see no reason why, in process of time, devotion to a high ideal in this particular, under a new standard of professional obligation, should not reward our zealous efforts with a close approach to complete extinction through prevention of puerperal eclampsia. And when we shall have done all that, we shall have done our whole duty by our patients and ourselves.

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## REPORT OF A CASE OF TETANUS TREATED WITH ANTI-TETANIC SERUM.

*Read at the annual meeting of the Aberdeen District Medical Society,  
Aberdeen, S. D., March 17, 1903.*

By CHARLES B. MALLERY, M. D., S. D.

ABERDEEN, S. D.

The patient was L. L.; aged thirty-five years; of Norwegian parentage, but born in Wisconsin; a machinist by trade; very strong and muscular; weight 186 pounds; complexion light. The patient has always been temperate and does not use tobacco in any form. He has never been ill since childhood.

On January 28th, last, while working at Pierre, he stepped on a nail, which penetrated his shoe and foot at a point one and one-half inches posterior to the junction of the great and second toes. This wound was not very painful and soon healed over. There was nothing applied to it except some tincture of arnica, under the advice of a doctor whom he saw in a drug-store at Pierre, who told him that the wound would not amount to anything.

He kept on at work until February 9th, when he finished his job, although he noticed that his neck was stiff on February 5th. This was the eighth day after the injury, and



his jaws were well set on Friday, February 6th. He could not come home Sunday as there were no trains, and on Monday morning he finished loading the gas plant that he was working on and took the afternoon train home, arriving here at about midnight.

He walked from the Northwestern depot, nearly a mile, to Dr. McNutt's office, who prescribed a mixture of chloral and bromide, and gave him a dose of calomel. As the doctor expected to go away the next morning, he referred him to me, on the thirteenth day after the reception of the injury and the fifth after the appearance of the first symptoms.

I saw him at 9.30 a. m., February 10th. At that time his jaws were set, not tight together, but would admit an object about half the size of a lead pencil. The muscles of the back of his neck and down his spine were in a state of tonic spasm. He was able to walk with difficulty about his room and could swallow liquids, which he could take readily because he had lost a molar tooth. His pulse was 94, and his temperature F. 99.2 degrees.

The wound in his foot was healed, leaving a blue looking scar, which was not locally painful, but pressure on it caused pain in his neck and jaws. I made a wide incision around the scar, letting out a few drops of thin watery pus, and found imbedded in the plantar fascia a piece of felt, from the felt shoe he had worn, about the size of a French pea. I thoroughly curetted the wound and applied tincture of iodine. At this time my prognosis was very bad (judging from my reading and from an almost identical case that I had in 1896, which died on the eighth day after the appearance of the first muscular stiffness), unless, perhaps, the serum treatment might be of benefit. We concluded to try the serum treatment and telegraphed for a supply of serum. In the mean time, I continued Doctor McNutt's anti-spasmodics.

February 11th. There was a noticeable increase in the amount of muscular rigidity; he was obliged to stay in bed, but could still turn from side to side. The pulse was 80 and the temperature F. 99 degrees. I used twenty cubic centimeters of antetanic serum at 10 a. m., and he had his first general attack of opisthotonos one-half hour afterward. He could still eat without trouble.

February 12th. A nurse was secured, who kept a thorough case record during the remainder of his illness. To-day he cannot turn in bed without assistance. His pulse varies from 78 to 90, and his temperature from F. 99 degrees to F. 99.4 degrees. I injected twenty cubic centimeters of the antetanic serum, and again he had two severe convulsions within an hour. This worried me as I had had no previous experience with the serum, and it is evident that it is a powerful remedy, consequently on February 13th, I waited until afternoon before using any more. During the morning of the 13th, he had several convulsions, which were more severe than any he had had before. At this time his voluntary muscles were all in a condition of tonic spasm (except those of his fore arms), his abdomen was as hard as a board and he was suffering severe pain. His pulse ran from 92 to 94, his temperature from F. 98 degrees to F. 99.2 degrees, and he passed forty-one ounces of urine during the twenty-four hours. The wound in his foot looked well, in fact it caused no more trouble, but healed rapidly. I used twenty cubic centimeters of the serum at 2 p. m., with immediate relief of the pain.

February 14th. He had a bad night, sleep being disturbed by frequent convulsions. The serum ordered to be here this morning failed to come until evening, and during that time he grew rapidly worse. All his muscles were in a state of tonic spasm all the time and a very little noise or a draught of air would cause a state of opisthotonos. Risus sardonicus was well marked. His respirations were from twenty-six to thirty per minute and very shallow, his face was bloated and of a dark red color and there was great difficulty in talking and at times in swallowing. The pain was very severe and I gave him three-quarters of a grain of morphia and one hundred grains of chloral hydrate between 12 and 6 p. m., with no effect on the pain or muscular rigidity. His temperature ran between F. 98 degrees and F. 99.2 degrees, his pulse between 84 and 98, and he passed thirty-eight ounces of urine. He was liberally drenched with saline waters, but his bowels only moved when an enema was used. He perspired freely all the time, but was not troubled with priapism or retention of urine. At 9 p. m., I gave him forty cubic centimeters of the serum and he felt easier in an hour.

February 15th. The same condition exists as yesterday. No more chloral or morphia has been given since 6 p. m. last night. The pulse ranged from 84 to 104, and the temperature from F. 98.4 degrees to F. 100 degrees; he passed forty-two ounces of urine, and his bowels moved twice by use of an enema. I gave forty cubic centimeters of the serum at 9 a. m. and twenty cubic centimeters at 9 p. m.

February 16th. The pulse ranged from 80 to 96, the temperature from F. 98.6 degrees to F. 99.4 degrees, and he passed thirty-nine ounces of urine. The muscles were all tense and rigid, the respirations were still very shallow and there were plain signs of deficient oxygenation of the blood. I gave sixty cubic centimeters of serum at 10 a. m. and forty cubic centimeters at 8 p. m.

February 17th. The pulse ranged from 88 to 96, the temperature from F. 99 degrees to F. 100.4 degrees. He passed forty-two ounces of urine. I gave sixty cubic centimeters of serum at 9.30 a. m. and one hour afterwards he was free from pain. I noticed that he would get the nurse to flex his legs, for the first time in four days. I gave twenty cubic centimeters of serum at 9 p. m., and he was delirious during the fore part of the night. A general dermatitis over his chest and abdomen, with large bullae on the right flank was noticed at this time.

February 18th. The pulse ranged from 92 to 104, the temperature from F. 99.4 degrees to F. 100.6 degrees. He passed forty-one ounces of urine. He slept very little during the latter part of the night. I gave twenty cubic centimeters of serum at 9 a. m. and the rigidity of his legs seeming to increase again, I gave forty cubic centimeters at 2.30 p. m., which was the last given. The dermatitis spread over the thighs.

February 19th. The pulse ranged from 84 to 108, the temperature from F. 99 degrees to F. 100.6 degrees. He passed forty-four ounces of urine. He could spit for the first time, and found that he had bitten his tongue severely. The dermatitis is improving, and while the muscles of his neck, trunk and abdomen are still rigid, those of his arms and legs are more flaccid.

February 20th. The pulse ranged from 84 to 93, the temperature from F. 98.6 degrees to F. 99.6 degrees. He

passed forty-seven ounces of urine. He had about a dozen general convulsions, which were induced by noise or some external nerve irritation; between these he was more comfortable and his muscles were more relaxed.

From February 21st to February 25th, there was a general and rapid improvement in the condition of his muscles, so that on the latter date I noted that he could feed himself and could use a tooth brush inside his jaws. On the night of March 1st, a fire occurred in the basement of the block, in the third story of which he roomed, and he dressed himself with very little help and walked through dense smoke, down two flights of stairs and across the street to a hotel, with no general spasm. When I saw him just after this his pulse was 100, temperature F. 98.6 degrees and respirations 21, and he had had no further trouble. His jaws and muscles are now as loose as ever, and his weight on March 5th was 163 pounds, a loss of 23 pounds in one month.

#### CONCLUSIONS.

I find reported<sup>1</sup> 277 cases, with a general mortality of 63 per cent. divided as follows:

130 cases began before the tenth day, of which 101 died—78 per cent.

126 cases began after the tenth and before the twenty-second day, of which 65 died—43 per cent.

21 cases began after the twenty-second day, of which 8 died—38 per cent.

Yandell<sup>2</sup> has reported 415 cases and says, "that where the symptoms were delayed until the fourteenth day from the time of injury, the recoveries exceeded the deaths." There were<sup>3</sup> 505 cases during the civil war, with a mortality of 89.3 per cent. Wilson<sup>4</sup> has collected 52 cases following vaccination wounds, with a total mortality of 78.8 per cent. Dividing these cases into two classes, we find 39 cases treated without antitoxin, with a mortality of 82 per cent, and 13 cases in which it was used, with 10 deaths and 3 recoveries, or a mortality of 76.9 per cent. In the St. Louis<sup>5</sup> outbreak there were 60 packages of infected diphtheria antitoxin given out, and the small mortality is attributed by Fisch, to the preventive use of the serum. Therefore I think we may



conclude that this would have been a fatal case without the serum treatment, because his symptoms began on the eighth day after the receipt of the injury, and because of his desperate condition on February 14th, which was so rapidly growing worse, and was arrested at least, by forty cubic centimeters of the serum.

Second: The effect of the serum treatment is noticeable in the speed of the recovery. This man is well, with no trismus or muscular spasm of any locality. Reports show that the favorable cases treated in other ways, recover very slowly and that muscular rigidity, and especially trismus, persist for from ten to fifteen months.

Third: Had I been able to get the serum in larger quantities at first, and had I dared to use it as I did later, I believe that the disease would have been stopped four days earlier.

Fourth: From the reports at hand I doubt if there is any noticeable difference, whether the serum is injected under the skin, or by sub-arachnoid instillation into the spinal canal, the vital point being early use of the remedy in large quantities.

In this case the amount used was 400 cubic centimeters, or 20,000,000 units, which would be sufficient, according to Behring, to immunize 403,632 pounds of mice. It was injected indiscriminately under the skin of his arms, legs, chest and abdomen.

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ASSOCIATION OF THE ALUMNI OF THE ALBANY  
MEDICAL COLLEGE—THIRTIETH ANNUAL  
MEETING.

The thirtieth annual meeting of the Association of the Alumni of the Albany Medical College was held in the Alumni Hall on Tuesday, May 5, 1903. The usual informal reception was held in the college library, where photographs were exhibited and greetings exchanged, between the hours of 9 and 10:30 a. m. The annual meeting was called to order by the President, Dr. Walter W. Scofield ('82), of Dalton, Mass., at half-past ten o'clock.

The following named members of the Association, with invited guests, students of the college and others interested, were present: Henry Darwin Didama, ('46); Hamlin B. Maben, Henry D. Wells, ('57); Albert Vander Veer, Herman Bendell, ('62); Alfred B. Husted, ('63); Daniel C. Case, Willis G. Tucker, ('70); Gebhard L. Ullman, John K. Thorne, ('71); Isaac H. Lent, Daniel H. Cook, John H. Carmichael, ('73); Thomas Wilson, ('74); Mark M. Lown, Maurice J. Lewi, David H. Lown, ('77); William O. Stillman, Earl D. Fuller, George P. K. Pomeroy, Frederick H. Brewer, ('78); Ezra A. Bartlett, William J. Nellis, ('79); Frederick A. Classen, ('81); Addison O. Roberts, John B. Washburne, Sidney F. Rogers, Wallace E. Deitz, Walter W. Scofield, ('82); J. Wilson Poucher, W. S. Donnelly, Irving D. LeRoy, Herbert L. Odell, John F. Reilly, George A. Bradbury, Charles P. McCabe, ('83); Thomas P. Scully, ('85); Charles H. Moore, Willis G. Macdonald, Andrew MacFarlane, ('87); Charles F. Clowe, John Archibold, ('88); William Van Doren, ('89); Walter G. Murphy, ('90); James W. Wiltse, Charles E. Davis, Harvey W. Van Allen, ('91); Clement F. Theisen, Leo H. Neuman, ('92); Percy G. Waller, Walter B. Sabey, George H. Jones, Martin S. Reid, Edward M. Leach, Charles H. Herrick, ('93); Charles Bernstein, ('94); Henry L. K. Shaw, ('96); Lewis T. Griffith, ('97); James F. Rooney, Edgar A. Vander Veer, ('98); John W. Burns, ('01); Edwin A. Mason, J. Parker Talmadge, August J. Freutel, La Salle Archambault, ('02); Henry M. Chandler, Philip Wolfman, Thomas S. A. O'Connor, William L. Mulcahy, Archie J. Cul-

len, Miles A. McGrane, Samuel H. B. Basch, Frederick E. Bolt, James S. Vander Veer, Sylvester C. Clemans, Virgil D. Selleck, Russell Clute, I. Ernest Van Hoesen, Conrad R. Hoffman, Frank Keator, Archibald J. Douglas, John E. Canfield, R. Burdett Hoyt, ('03); Henry Hun, Samuel B. Ward, (Hon.).

On motion of Dr. Tucker, the minutes of the last annual meeting were approved as printed in the ALBANY MEDICAL ANNALS.

The President introduced Professor Henry Hun, who delivered the following address of welcome on behalf of the faculty:

### ADDRESS OF WELCOME

#### *Fellow Alumni:*

In the name of your older brothers, the faculty, I welcome you home. A physician, more than most men, is tied down by exacting duties, which both he and his patients think no one else can do as well. I am quite sure that each of you has found it no easy matter to return to-day to this, the fountain of your medical youth, and I am equally sure that your Alma Mater is very happy in having so many of her scattered children once more under her sheltering roof.

Your return to-day is a token of your affection and loyalty to the college, and this rests, I hope, on a solid basis of gratitude; for I hope that you found when you started in practice you were well equipped for your life's work and that since then, you have not been outstripped in the race by men from other schools.

If your Alma Mater has given you so much she is entitled to your gratitude. If she has failed you should point out her defects and try to remedy them. Certainly there have been excellent and successful physicians graduated many years ago from this school, but we, the faculty, think that no class has left these walls better equipped for successful work than is the class of 1903. Certainly the college is in a constant condition of change; new teachers and new methods are constantly being tried.

On March, 19, 1890, thirteen years ago, I gave the address of welcome to our Alumni, and in that address announced that during the next year we were going to introduce for the first time a regular three years' graded course of lectures, recitations and examinations; for up to that time our curriculum was so arranged that only one lecture was delivered in the college at the same time; so that every student could attend every lecture each year. We have taken a long stride forward since that time, the term has been greatly lengthened, so that Commencement Day is in May instead of in March. The three years' graded course, commenced with so many doubts and fears, was not only put into effect, but has long since been replaced by a four years' graded course.

In our progress towards better teaching during these thirteen years, two great landmarks stand out prominently to mark two great and sudden advances in our effectiveness. One of these is the opening of the Bender Laboratory, which has not only served to give our students the very best instruction in histology, in pathology, medical and surgical, and in bacteriology, but has awakened in them a truly scientific spirit which they carry forward with great advantage into all departments of medicine. The joy of our commencement day is mingled with great sorrow that we are to lose from our teaching staff Dr. Blumer, a really great teacher and investigator, and a man whom we have all learned to respect and love. The second great landmark is the opening of the new Albany Hospital, which has been a success beyond our hopes and has furnished unexcelled opportunities for clinical study. It may be said that the fourth year work is now almost entirely clinical and more than half of it is in small sections, so that each student is brought into personal contact with many patients. This great expansion in clinical teaching has been rendered possible only by the enlargement of the Albany Hospital.

The Bender Laboratory and the Albany Hospital have taught the students much; and they have taught the faculty not a little. They have, I think, expanded the view of the faculty, so that we are beginning to comprehend what a medical school really is, or should be. I have seen medical schools all compact under one roof, on one floor lecture rooms, on another a laboratory, on another a chemical laboratory, and so on. Indeed in some cases hospital and school have been united under one roof. To some minds such is the ideal medical school. It is complete in itself, but it contains no element of growth. It is compact and is a unit, but it cannot compare with that stronger unity, made up of vigorous individuals combined together with a common purpose into one harmonious whole.

At the present time the Albany Medical College is composed of three such units, each one of which is capable of, and indeed invites, indefinite expansion along its own lines. One of these is the Albany Hospital, to which each year in its life so far important additions have been made. Another is the Bender Laboratory, a center for teaching, a center for research work and center whence the scientific spirit radiates into all the medical life of this community. Lastly there is the old college with its old triangle, and its old, though remodeled, amphitheater around which so many memories linger. In each of these buildings instruction is given every day during many hours and all unite to make a harmonious whole. To this trinity we have now advanced.

Great as the growth of the school has been during these thirteen years, we cannot allow it to stop. We must still advance. In such a family gathering as this we should not praise alone, we should also look for defects and deficiencies and try to remedy them. Physiological chemistry and pharmacology are hardly taught in the school at all in the modern sense of these words. There is no physiological laboratory. What we need above all at present is a laboratory for these departments, in which anatomy might well be included, and above all we need experts to teach in these departments. Practical medicine and surgery can possibly best be taught



by men in active practice. They can earn their living by their practice and they can gratify their love of teaching, even if the pecuniary recompense be small. They are undoubtedly better clinical teachers because they are in active general practice. But the medical sciences cannot at the present time be properly taught by men in the active practice of medicine. That this work is so comparatively well done in this school is due to the wonderfully strong and devoted man who fills the chair of physiology.

Teachers of the medical sciences must devote their entire lives to the scientific work and must receive salaries which will enable them to live in comfort. The receipts from tuition in the Albany Medical College are, as you well know, totally inadequate to pay such salaries. Our only hope lies in large endowments for such chairs. A large laboratory is of little or no use without an endowment; an endowment will enable us to get a good man to teach even if we have to patch up in the old school building a wretched temporary laboratory.

Endowments are therefore, our greatest need, we do not need money for prizes to keep alive the memory of the donor; we need money for endowments of professorships, not only to keep alive the memory of the donor, but to keep alive the school itself. Other great medical schools have large endowments, we are in vital need of such. Great teachers first and stately buildings next are what we most need.

Have our alumni no duty to perform in this matter? At small cost to you your Alma Mater has well equipped you for your life work. Many of you are successful practitioners. Now in your prosperity cannot you spare a little for the school? Cannot you repay your debt to your Alma Mater? Cannot you do more? Be generous, reverse the present conditions, put your Alma Mater in debt to you. You are many, many small contributions make one large one; cannot you start an alumni fund to which you can add something each year? Even in such a wealthy institution as Yale its alumni are given an opportunity of contributing to the alumni fund each year. Many of us gladly avail ourselves of this opportunity. Such an example is contagious. I am sure that the faculty will not be backward in contributing to the Albany Medical College Alumni Fund.

So, as I welcome you to the joys of this reunion, to the renewing of old friendships and of old associations, I would remind you that no joy is perfect unless it rests on duty accomplished. We have reached a point where the continued life of the school depends largely on the devoted loyalty of its alumni, and I will close with this one question. Has your duty to your Alma Mater been fully performed?

On motion of Dr. Albert Vander Veer, the thanks of the Association were tendered Professor Hun for his able address, and a copy was requested for publication.

Dr. Alfred B. Huested moved that the President appoint a committee of five to nominate officers for the ensuing year. Carried. The President appointed as such committee: Drs.

A. B. Husted, ('63); E. A. Bartlett, ('77); Thomas Wilson, ('74); Lewis E. Griffith, ('97); and J. P. Tallmadge, ('02). The committee retired.

The Recording Secretary presented the

#### REPORT OF THE EXECUTIVE COMMITTEE AND RECORDING SECRETARY

Three meetings of the Executive Committee have been held during the year. At the first meeting held May 10, 1902, the recording secretary presented the records of the last annual meeting, including an account of commencement exercises, and on motion this was referred to a printing committee of three members. The treasurer, Dr. Robert Babcock, presented a report showing a balance on hand of \$114.29. The treasurer also stated that the building fund, with interest to date, was \$83.01. Dr. Tucker, chairman of the committee on the alumni dinner, presented a report showing a deficit of \$43.61, which had been paid by college faculty. The successful essay, offered in competition for the Schuyler prize, was referred to a special committee consisting of Drs. Mosher, E. A. Vander Veer and Shaw. Dr. James W. Wiltse was elected a member of the executive committee in place of Dr. Eugene E. Hinman, elected historian of the Association.

At a meeting held February 27, 1903, the distribution of the proceedings of the last annual meeting was reported. Fifteen hundred and fifty copies had been printed and mailed to members of the Association whose addresses were known. The usual arrangements for alumni day were discussed and committees appointed.

On motion, the faculty of the college were invited to participate and to appoint a representative to deliver an address of welcome at the opening of the annual meeting. The corresponding secretary was authorized to have the usual notices printed announcing the meeting. It was on motion decided to have the usual alumni dinner on the evening of Commencement Day.

At the third meeting, held April 24, 1903, Dr. Tucker reported that the faculty had requested Professor Hun to deliver the faculty address of welcome. Dr. MacFarlane reported that the notices of the alumni meeting and of commencement had been sent to each alumnus and return postals were inserted in the notices to members of the decennial classes. A letter from Dr. Bassett, the first graduate of the college, was received, read, and ordered to be inserted in the annual proceedings. Dr. Scofield stated that he would send out at his own expense five hundred postals urging attendance of alumni. Dr. Nellis reported arrangements made by dinner committee. The historian, Dr. Hinman, stated that boxes had been secured to hold photographs, data, etc., for each class. Thanks were unanimously tendered Dr. Hinman for this unique arrangement.

On motion of Dr. Tucker, the report was adopted and ordered entered upon the minutes.

The Treasurer, Dr. Robert Babcock, presented his report for the year as follows:

## TREASURER'S REPORT

## CR.

Balance on hand June 1, 1902.....\$ 3.14

Dues received to May, 1903..... 104.00

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\$107.14

## DR.

Bills paid for which vouchers are presented.....\$100.39

Balance on hand May 1, 1903.....\$ 6.75

College Building Fund May 1, 1903.....\$102.93

[Signed] ROBERT BABCOCK, *Treasurer.*

On motion of Dr. Daniel H. Cook, the Treasurer's report was referred to an auditing committee consisting of Drs. Cook, Craig and Roberts, who subsequently reported it correct. The report of the Auditing Committee was received and the committee discharged, and the report of the Treasurer was accepted and ordered placed on file.

The President's address being the next order of business, Dr. William B. Sabin, a vice-president of the Association, was called to the chair, and President Scofield delivered the following address:

## PRESIDENT SCOFIELD'S ADDRESS

*Fellows of the Alumni Association:*

Although I have not attended all of the thirty annual meetings of this society, I have had the pleasure of enjoying a majority of them, for

"'Tis twenty years and something more,  
Since all athirst for useful knowledge,  
I took some draughts of classic lore  
Drawn very mild from this old college."

That our old college is in a healthy, prosperous condition can not be more clearly proved than by pointing to the interest which her alumni take in her welfare. Only succeed in keeping an institution or a business in the minds of the people upon whom the institution or business depends, and success is reasonably certain. What better way has the Albany Medical College of presenting its work and claims to physicians and prospective students than through the medium of the Alumni Association, its various local organizations, and its bright and ably edited MEDICAL ANNALS?

The courteous welcome accorded us by the faculty on Alumni Day, and indeed, whenever we visit the college or hospital, is an evidence that the

college recognizes and appreciates the influence and loyalty of her alumni.

On our part we can well feel proud of Alma Mater. She is keeping fully abreast of the times, and is well in the front rank of institutions of her kind. This she is doing, too, under one serious handicap, viz.: the condition and location of her college building. This institution has long since outgrown its college home.

Said President Maben in his address of 1898: "She has the nucleus of a new and grander college building. Why is this? It has become necessary from the growth of the institution." What was true in 1898 is still more an urgent necessity to-day.

Is it not time that active effort be made for a new college to be located near the new hospital?

This location is demanded, not alone for the comfort and convenience of the faculty, but as well for the students, both from a physical and financial standpoint. Not to speak of the very great advantage to the student body as a means of facilitating study and investigation.

As the locust emerges after many years to cast off its old shell and go forth a new and more highly developed creature, so let this institution arise and erect a new college building, built according to all of the latest ideas of healthfulness and efficiency.

Can not this be gone about soon? Shall not the older professors in this college have the pleasure of teaching in a building which shall exceed in greatness even their fondest dreams? Is it not the duty of the alumni to urge this movement, and lead in subscribing (as they may severally be able) toward the cost of such a structure? Oh! that some benevolent multimillionaire would turn his generous eye in our direction, and seeing our need, would by a gift of one hundred thousand or more dollars place the Albany Medical College on the footing that she so richly deserves.

Let us turn now to our Association.

The alumni are forging ahead. Their influence is more and more felt and appreciated by the public. They stand as trusted physicians, influential citizens and staunch friends of good government. They are earning good livings and aiding the dependent portion of humanity by enormous amounts of charitable services. Most of them are saving something for age and infirmity, while contributing liberally to every cause which makes for the good of mankind.

Do you want a better record? Every short time we hear someone speaking in praise of a scientific article or of some other achievement by one of our fellow graduates. Usually the narrative is ended with the question: Do you know the doctor? Then comes our triumph. Oh, yes, he is an Albany College graduate. I have met him many times at our reunions. Then the look on the narrator's face is another source of gratification. Such experiences should stimulate us to do our best, for the success of every alumnus adds to the working capital and success of us all. Hence the positive equation is established; as this college succeeds with its students so the alumni succeed in their various fields of labor. Is it not then to our interest to aid the college in every honorable way?

As to our duties to ourselves and to one another: first, let us constantly study and restudy our materia medica and therapeutics. These are after



all the vital branches of medicine. If we know the properties of drugs, their indications and how to use them, we may have some hope of relieving the sick and thus giving satisfaction to our patients. The public demands value received. There must be relief from physical suffering if possible, and that too with a minimum amount of inconvenience to the patient and friends.

Prompt, energetic and effective action instead of losing too much time splitting hairs over the niceties of physical phenomena is what is being called for. The physician who can respond, act, and relieve suffering the most promptly, consistently with a fair amount of investigation is the one whose services are most in demand. One who has accomplished something along these lines took for his motto, "Effort is nothing, results are everything." Ways and means of accomplishing results are what the doctor is after. Their source, their standing, their nature count as nothing beside the question of their utility. In many medical schools too large a proportion of the students' time is required upon the study of bacteriology and in the consideration of especial subjects, so that when he graduates, the young physician knows a great deal about staining bacteria, preparing culture media, the methods of microscopical diagnosis, etc., etc., but next to nothing of drugs, their properties, action and indications. Very little has been said to him of the vital importance of using only pure drugs of uniform strength; and of the necessity for him to be able to determine for himself something of these qualities. Thoroughness in these particulars has gone far toward placing the Albany Medical College where it now stands in public esteem. Will there not be less need for the surgeon's knife as general medicine advances? Will not the developments in preventive medicine render humanity immune to the ravages of many of the diseases which to-day are running rampant, preparing their victims for the necessity of surgical procedure?

Is it not safe to predict that within the near future, operations for the removal of the various malignant growths will cease to be a necessity?

Tubercle must soon succumb to science, and who knows but that much abused little organ, the vermiform appendix, (so-called for want of a physiological title), shall be rendered far more safe from the assaults of the scapel than it is to-day?

Secondly, after the physician has been intelligently at work for a few years, and looks honestly at himself, he should be able to note the parts of his duties in which he must needs outside help. He can then select the topics on which he should especially refresh his mind and acquire new ideas. He should then take a course of post-graduate study along these lines. Cannot the Albany Medical College and Albany Hospital provide such opportunities for her graduates?

The writer is happy to testify to the very substantial benefit received from the clinical course given at the Albany Hospital two years ago. One means of keeping ourselves brightened up is the medical society. No physician, no matter how much he studies and read his periodicals, can afford to neglect, in the slightest degree, the meetings of his medical society. Every one of these meetings may, by giving the proceedings close attention,

amount to quite a clinical lecture; and always strengthens the individual availing himself of the opportunities thus afforded him.

Thirdly, let us feel our responsibility in the matter of alcoholic beverages. Has not our experience taught us that intoxicants taken as beverages are harmful and only harmful? That they are harmful whether taken moderately or to excess? Have we not become convinced that as a medicine, alcoholic liquors have far less beneficial effect upon the human economy than we once supposed? Do we not feel that it is our duty to study to restrict the use of alcoholics as medicines to the lowest possible point, and to positively discountenance their use as beverages, by precept and by example?

Fourthly, interest in our college and in ourselves as individuals begets interest in all of our fellow alumni. As we owe allegiance to Alma Mater, so we are under obligation to stand by one another. Not to be over-clannish, but to be on the lookout to aid a fellow alumnus and to speak words of cheer and encouragement when we see that they are needed. Let each one make an especial effort to correspond with members of his class on each decennial year, and urge all to come to the reunion. Experience has taught the writer that such correspondence will pay large returns for the effort. Those of us who live some distance from Albany should join the nearest local alumni society or help to found others at suitable places. It is not only our duty to join these societies, but we should do something. "Be not simply good, but good for something." Attend meetings, contribute articles, subscribe for and contribute to the ALBANY MEDICAL ANNALS, and thus keep in touch with one another and with our dear old school.

"As comrades of a scattered band  
At war against disease and death,  
We meet to grasp the friendly hand,  
And reaffirm our common faith."

To the members of the graduating class I will say:

Dream as much as you may of the glorious struggle you are going to make to acquire eminence in general surgery, of your work in some chosen specialty, or of your splendid results in bacteriological research. Dream at graduation of the rich pecuniary returns which such effort will be sure to bring you; yet a very large percentage of every graduating class will be what are known as general practitioners. This is peculiarly true for a medical school of this general character. The class of men who matriculate here from year to year are men whose scholastic attainments, financial and social standing, as well as the course of instruction given, tend to gravitate to general practice. True, there are many exceptions, still we are proud to say that our alumni are helping to fill the ranks of the great army of general practitioners: the men who go out on the firing-line, so to speak, of practice, and who wage war with the great host of human maladies.

The tendencies of the times have been to depreciate the work of the general practitioner and to laud the specialist, particularly the surgical specialist. All glory and honor to the noble heroes who have helped to

lift the various departments of surgery to the high eminence on which they now so securely stand, and all possible encouragement be given to those who shall plant her banners on still higher pinnacles of fame and usefulness. Still, while we applaud these heroic deeds let us look with appreciation upon the honest, earnest, energetic multitude in the profession who are going from home to home, quietly, modestly, but effectively aiding mankind from birth to age; yes, even helping the loving one who is preparing to give him birth to perform that God-given function.

To the practitioner it is given largely to preserve and direct the tender infant, to guide the growth and keep pure and strong the developing youth; and to advise and foster the mature and aging ones, with and for whom he is ordained to labor. Then whatever be your position, whether in the general or in an especial field of practice, remember that you are working in the name of God for the good of man.

And now, gentlemen of the graduating class, it becomes my pleasant duty to welcome you to membership in the Association of the Alumni of the Albany Medical College. I trust you will come to regard this association as the organization to which you owe especial allegiance and that you will try to promote its welfare by every means in your power. May every possible degree of success attend your professional efforts and may you all live temperate, manly lives.

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The members of the Class of 1903 were present in a body, and rose as the President addressed them at the conclusion of his address, and received them into membership in the Association.

Dr. Daniel H. Cook moved a vote of thanks to the President for his interesting address, a copy of which he was requested to furnish for publication. Vice-President Sabin put the motion to a vote, and declared it unanimously carried.

President Scofield then resumed the chair.

The report of the Historian of the Association, Dr. Hinman, was then presented, and ordered entered on the minutes.

#### REPORT OF THE HISTORIAN, E. E. HINMAN, M. D.

##### *Fellow Alumni:*

To-day as we look back upon the thirty years of our existence as an organization and survey its history, we must do so with a feeling of pride. That history is replete with the achievements of many who have become famous in the progress of medicine and surgery. As we read the reports of the various class historians we learn that the modest shingle of an A. M. C. graduate is to be found everywhere throughout the length and breadth of our land, and more, very many of them have won distinction in the various departments of our art.

The work of your historian during the past year has been an especially pleasant one. The historians of the decennial classes of '43, '53, '63, '73, '83 and '93 have all responded with willingness and our records are made more complete and valuable. Provision has been made whereby these records, photographs, etc., will be carefully preserved in convenient form for reference by a system of filing cases located in the college library. The roster, records and photographs of each class are now to be found in the library, each class in a filing case by itself, and it is hoped that the members of the association will aid the historian in making these records complete by sending in their photographs, where class groups have not been hung upon the walls, and any information as to deaths, change of residence, or items of interest will be thankfully received and carefully preserved.

We have lost nineteen by death during the year.

#### NECROLOGY

- Louis Charette ('42), at Glens Falls, N. Y., December 26, 1902, æt. —.  
 Jacob A. Dockstader ('45), at Medina, N. Y.  
 Stephen C. Johnson ('49), at Luzerne, N. Y., January 27, 1903, æt. 77.  
 Gustavus W. Pope ('51), at Washington, D. C., July 21, 1902, æt. 74.  
 F. E. Martindale ('53), at Port Richmond, N. Y.  
 Granville S. Thomas ('54), at Chicago, Ill., July 11, 1902, æt. 67.  
 Jerome B. Holcomb ('55), at Newport, N. Y.  
 John B. Hartwell ('56), at Woodmere, N. Y., June 23, 1902, æt. —.  
 D'Estang Dickerson ('57), at Kansas City, Mo., May 3, 1902, æt. 68.  
 David F. Van Aken ('60), at Malden, N. Y., January 30, 1903, æt. 67.  
 J. Newton Arnold ('62), at Clyde, N. Y., May 17, 1902, æt. 65.  
 Robert M. Hunt, ('69), at Nevada City, Col., July 15, 1902.  
 James I. Scollard ('74), at Clinton, N. Y., February 20, 1903, æt. —.  
 Adam T. Van Vranken ('74), at Watervliet, N. Y., January 19, 1903, æt. 55.  
 Menzo Barkman ('79), at Albany, N. Y., August 10, 1902, æt. 47.  
 Theodore F. C. Van Allen ('83), at Albany, N. Y., October 28, 1902, æt. 41.  
 Edgar W. Morehouse ('84), at Peru, N. Y., May 13, 1902, æt. —.  
 James H. Timmers ('91), at Buffalo, N. Y., November 24, 1902, æt. 34.  
 Gilbert W. Thomas ('98), Little Rock, Ark., December 11, 1902, æt. —.

Respectfully submitted,

E. E. HINMAN, M. D., *Historian*.

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#### REMINISCENCES OF THE CLASS OF 1843

COLDSRING, N. Y., April, 1903.

DR. EUGENE E. HINMAN,  
*Historian of Alumni,*  
 Albany Medical College.

*Dear Doctor:*—Your note of March 9th, reminded me of a correspondence we had previously had, in which you asked me to give my reminiscences of the graduating class of the Albany Medical College, of which I was a member—the class of 1843.



Sixty years have elapsed since that date, and my memory of the persons and events of that time is very nebulous. Looking over the list of the graduates of that year, of very few do the names recall even the faces of my classmates. With a few I was intimate. Among these was Clark, a British Canadian, who died in Albany about the time of the graduating exercises—a reserved, taciturn man—every inch a Briton. Also Geo. N. Dox, of grand physique, with head and heart in accord. Henry B. Fay, a modest, quiet, unpretentious character, highly esteemed by the Professor Hun of that day. Murphy, a jovial, amusing fellow. Whitbeck, a very bright man, also appreciated by Dr. Hun. He would have made his mark in the profession had he survived. I saw him on his deathbed at Greenbush, a year or two after his graduation.

Of the other members of the class I soon lost trace. The presumption is that I am the sole survivor of the class. You gave me Rose Hills, Va., as the last place where Dox was known to have been. I wrote to him at that address, but my letter was returned. No such party there.

Attending the lectures with me was a young French Canadian—his name I cannot recall. I thought he was in my class, but must have been of a class before mine. He was a sprightly, laughing, amusing fellow, modest withal. He was impressed with the idea that he must needs read his thesis to a thronged audience. He told me that he had chosen as his subject, "*L'appareil Genital de la femme.*" "I will not be called upon to read that," he said, chuckling at the idea.

Joseph V. Brown graduated subsequently to me. Like myself, an Albanian, he and I were schoolfellows at the Albany Academy, and he like myself became a member of the medical corps of the army. He stood high in the corps. During the civil war he did most valuable service, and for the same received the brevet of brigadier-general. He died some years ago at Albion, N. Y.

I can recall no events tragic or comic occurring at the college during my course worthy of mention. One morning, during the lecture course, the class and the country were startled by the report in the papers of the mutiny on board the U. S. ship "*Somers.*" Poor Spencer, midshipman, paid the penalty of his life for his boyish, insane plot to seize the ship. Howard Townsend, his cousin, was then attending the lectures, and he and I conversed about the sad affair.

After a year's hospital practice I made an unsuccessful attempt at the practice of medicine in Albany. In 1847—the Mexican war then going on—I got a commission as assistant surgeon in the army; served a year in Mexico after the termination of the war, on the Indian frontier in Texas, California, Oregon, Dakota, and at posts in other parts of the country.

At the breaking out of the civil war I became full surgeon, with rank of major. My most important duty during the war was as medical director, Department of the Susquehanna, stationed at Philadelphia. Under my control were many of the largest military hospitals, with many thousands of patients. For my services during the war I received the brevets of lieutenant-colonel and colonel.

In 1885, having reached the legal limit of age, I was retired with the rank of colonel and took up my residence at Coldspring, where I now live, in the enjoyment of almost perfect health, being now in my eighty-second year.

I would like to join you at the meeting of the Alumni of the Albany College in May, but it will not be possible for me to do so.

With friendly greeting to you and to the Alumni, I subscribe myself,

Very respectfully,

JOHN CAMPBELL, *Colonel, U. S. A.*

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### HISTORY OF THE CLASS OF 1853

Since the class of '53 was last reported upon in 1883, its historian, Dr. B. A. Mynderse, has passed away, and being unable to find any member of that class willing to present its history at this time, that duty has devolved upon your historian. Fifty years have passed since this class emerged from these halls to take their place in the ranks of the medical profession. Twenty years ago the history of '53 was presented. Since then many changes have occurred and many have gone to their rewards.

To be brief, the history of the members of the class of '53 is as follows:

JAMES H. ALLEN immediately after graduation located at Gorham, N. Y., where he practiced successfully for many years. Died —.

GABRIEL D. AYRES was in general practice in Brooklyn, N. Y., where he died of pneumonia October, 1876, aged 51 years.

JAMES S. BAILEY first located at Casseta, Ala., remaining there six years, from which place he removed to Mobile, but the climate not agreeing with his family, he settled in Texas, until after the war, whence, in 1867, he removed to Albany. Dr. Bailey served as brigade surgeon in the Confederate army, and was offered a position in the medical department of Soule University, in Galveston, but preferred to return to the city of his Alma Mater, where his son, Dr. Theodore P. Bailey, is now one of our leading practitioners. Dr. Bailey died January 24, 1898, aged 73 years.

S. P. BARNARD and H. B. BARSTOW have never been heard from.

JOHN H. BECKER practiced in New Scotland, Albany County. He died in 1873.

GEORGE H. BENSON located at Valatie, N. Y., where he practiced a few years, removing thence to Hudson, N. Y., where he died May 30, 1896.

DELOS W. BRAMAN has not reported.

WILLIAM B. BROWN has not reported.

GEORGE E. BULLARD began practice in Niagara, N. Y., but, as the climate did not agree with him, soon moved to Millville, Mass. Here his increasing practice compelled him to change his residence to a more central location and he opened his office in Blackstone, Mass., where he now resides, having retired from practice. Dr. Bullard has served as medical examiner of the South Division of Worcester County, and for a number of years was chairman of the Board of Selectmen and Board of Health.

M. H. BURTON served as volunteer surgeon during the civil war, afterwards practicing in Troy, N. Y., where he died April 28, 1895.

WILLIAM F. CADY served during civil war as surgeon to the Twelfth Illinois Infantry and later opened his office in Lafayette, Ind., where he died in 1885.

HENRY S. CASE practiced for many years in Albany, where he died June 14, 1899.

JAMES CROWELL has never reported.

HERCULE DANSEREAU practiced near New Orleans until 1858, removing thence to Thibodeaux, La., where he is still doing some medical work, though not in the best of health. He has a son who is a successful practitioner near him.

ALEXANDER A. EDMESTON was assistant surgeon to the Eighteenth New York Vols., and afterward surgeon to the Ninety-second New York Vols. He died in 1871, aged 42 years.

HIRAM A. EDMONDS died of phthisis in Albany, April, 1857, aged 29 years.

THOMAS J. GARDNER has never reported.

W. R. GRISWOLD died in Chicago, Ill., February 21, 1892.

R. H. HAMMOND served as surgeon to the Twenty-second Confederate Vols., afterwards lost sight of.

FERDINAND V. HAYDEN saw much service among the Indians and traders of the Northwest. He was physician to the military surveying parties; was a professor of geology in the medical department of University of Pennsylvania, 1865-1872; was surgeon of volunteers during the war. After the war Dr. Hayden practiced in Philadelphia, where he died December 22, 1887, aged 58.

FREDERICK T. HENDERSON practiced with and later on succeeded his father at Whitestown, N. Y. After successfully practicing his profession, making a specialty of surgery, he died of phthisis May 2, 1870, aged 39 years.

JOHN H. HILL practiced, except for a short time, in Quaker Street, N. Y., where he died in 1881.

JAMES H. HOYSRADT has not reported since graduation.

I. G. JOHNSON practiced in Illinois and California, and then located in his native town, Greenfield Centre, N. Y., where he still resides in fairly good health, aged 72.

ROGER KEYS purchased an interest in a drug store in Philadelphia and followed that line of work until his death, June 10, 1890, aged 61.

CHARLES H. LORD has never reported, but he was known to have served as surgeon to the 102nd N. Y. Vols. during the civil war.

HENRY MARCH after practicing successfully for many years died while in California, May 7, 1896.

FRANK E. MARTINDALE served three years in the navy and then three years more in the army on the volunteer staff and in charge of Dale General Hospital, at Worcester, Mass. He died at Port Richmond, N. Y., this year.

ASA D. MCINTYRE has never reported.

H. C. MCMAHON died July 2, 1877, at Grand Rapids, Minn.

E. A. MERRIFIELD died at Macon, Mo., Dec. 7, 1900, aged 74.

J. A. MOWRIS writes that he practiced at Grahamville, N. Y., until 1862, when he was commissioned surgeon of the 117th N. Y. Vols. Remained on duty serving successively on the staff of Gen. N. M. Curtiss and Gen.

A. AMES. Was made surgeon-in-chief, second division, 10th and 18th Army Corps. Was seriously wounded in explosion of magazine at battle of Fort Fisher, N. C., January 16, 1865. Was nearby at the surrender of Lee. After the war, resumed practice in Syracuse, N. Y., removing to Lafayette, N. Y., in 1875, where he still lives, having retired from practice.

ISAAC J. MOXLEY practiced at South Bangor, N. Y. He died in that town October 12, 1884.

B. A. MYNDERSE practiced in Schenectady, N. Y., until the time of his death, October 2, 1887, aged 55. Dr. Mynderse presented the last report of this class in 1883.

H. M. REYNOLDS and E. C. ROGERS have never reported.

DWIGHT C. RECTOR practiced in Wisconsin for several years, and then saw service with the army in Alabama. After the war opened his office in East Troy, Wis., where he still resides in fair health, aged 77 years.

W. S. SCHERMERHORN was surgeon to the 16th Wisconsin Vols., and died in Jefferson, Iowa, June 12, 1892, where he had practiced since about 1880.

M. W. SEAMAN first opened his office in Glens Falls, N. Y., then migrated to Kansas and Illinois. He served three years as surgeon to the 122nd Illinois Infantry. He died in Denver, Col., September 15, 1897, aged 67.

DARIUS H. SEELEY has never reported.

ALEXANDER SHILAND died at Watervliet, N. Y., October 19, 1885

CHARLES P. STAATS served as assistant surgeon to the 67th N. Y. Vols. He afterwards practiced in Albany, N. Y., where he died April 16, 1884, aged 52.

PETER J. STANLEY practiced sixteen years at Ashland, N. Y., going from there to Windham, N. Y., where he practiced until a few weeks before his death, which occurred October 5, 1901, aged 76 years.

JOHN J. SWART practiced in Schoharie, N. Y. Died November 24, 1878.

LEROY TELFAIR died April 13, 1886, aged 52 years.

LEVI P. WAGNER was surgeon to the 114th N. Y. Vols., nothing more known.

LEVI WEED has never reported.

J. M. WHEAT first opened his office in Wellsburg, Pa., but soon removed to Lenora, Minn., remaining there for thirty-one years. During that time was active in state politics. In 1887 removed to Redlands, Cal., where he is now residing and is now serving as secretary to the city board of health.

GEORGE D. WHEDON began his practice in his home, Camillus, N. Y., living for a short time also in Plainville and South Butler, finally locating at Rose Valley, N. Y. Served in the army as assistant surgeon of 10th N. Y. Cavalry, and was for eight months the sole medical officer of the regiment. Afterwards organized and in charge of brigade hospital near Staffords, Va. Commissioned by Governor Hoffman surgeon of staff of 24th Brigade, N. G. S. of N. Y., and continued as such until death of General Green, its commander. Has since practiced in Syracuse until January, 1901, when an apoplexy compelled retirement. The doctor is now in fair health.

Respectfully submitted,

E. E. HINMAN, M. D.,

*Historian A. M. C. A. A.*



## HISTORY OF THE CLASS OF 1863

*Mr. President and Fellow Alumni:*

A report of the class was made by the writer nineteen years ago. That report records the fact that there were forty-four graduates. Seventeen of the class entered the service of the United States as surgeons and assistant surgeons. Two of these died while in service and one in 1883. Since then, it is learned that three more were in the service, and the following have died: William N. Whiteside, December 31, 1887, and William L. Baldwin, September 3, 1888, at Jacksonville, Fla., of yellow fever; Justus E. Gregory, October 25, 1890, at Brooklyn, N. Y.; Pierson Rector, January 22, 1891, at Jersey City, N. J.; Peter M. Murphy, June 27, 1894, at Albany, N. Y.; Daniel Peabody, 1894, at Springfield, Mass.; E. D. Chipman, May 24, 1895, at Saugerties, N. Y.; Portews C. Gilbert, June 11, 1898, at Saratoga Springs, N. Y.; John E. Burdick, April 30, 1900, at Johnstown, N. Y.; Charles E. Seger, date and place of death not known. Total known deaths thirteen.

The location, if living, or the knowledge of death, is not known of O. H. Blanden, Randall E. Ingersoll, Abram V. Ketchum, A. B. Skillman, Francis L. Turner, Henry Van Guysling. Thirty communications were sent out and answers received from twenty-one.

GEORGE F. BARKER is at 3909 Locust Street, Philadelphia, enjoying a period of rest, after the arduous labors of forty years. For a period of year up to 1873, he was professor of Physiological Chemistry and Toxicology in the Medical School of Yale University, then accepted the Chair of Physics in the University of Pennsylvania. Owing to ill health, he gave up this position in the fall of 1900, and was elected Professor Emeritus, and since then has spent most of his time in Europe. He has been President of the American Association for the Advancement of Science, the American Chemical Society, a member of the Legion of Honor, honorary member of the Royal Institute of Great Britain. He extends to all classmates present, cordial greetings and congratulations upon the rounding out of forty years of professional life.

D. C. BEEDE writes, "Entered service after graduation and served until February, 1865, then drifted west and located at Sparta, Wis., and remained. Operated a great deal in my day and performed the first laparotomy in this part of the country. At the time, it caused no little excitement in the locality. An old grandmother, half hearing about it, asked what the operation was, and being told that it was laparotomy, remarked, I understand, it is the same disease and operation that killed my old family physician back in York State. I have no regrets that my lines were struck in the practice of medicine, nor that I graduated from the Albany Medical College."

R. W. BRADY entered service on graduation, was taken prisoner at Drewney's Bluff, while attending wounded no battlefield, and spent three months in Libby Prison. On leaving service, went to Honesdale, Pa., where he still remains. He recalls the teasing of Prof. McNaughton by the yawns of the class, the recommendation of a scruple Ipecachuan and

ten grains of calomel, as a preliminary to the treatment of nearly all diseases; the explosion of powder crackers during a chemistry hour, and the severe calling down given by Prof. March for their pranks. He closes by wishing success to our good old Alma Mater.

JAMES C. COLEMAN entered service on graduation, and at close of the war, returned to Goshen, N. Y., and remains there to-day, was married in 1870, and is the father of thirteen children, one son in medicine and a graduate of the Albany Medical College. In common with others, has held many positions of honor and trust. Thinks he is the youngest of the class, as he was not twenty-one at graduation, but raised a full beard to help out his years.

HENRY T. DANA located in practice at Tully, N. Y., remaining until 1869, then moving to Chicago, and in 1872 returning to Cortland, N. Y., where he has since been in practice, holding during that time many positions of honor and trust.

C. B. DARRALL is reported to be living at Falls Church, Va.

WARREN ERASMUS DAY entered service June 10, 1863; was wounded in head at siege of Charlestown, afterward became connected with the regular army, and remained in service during small pox and yellow fever epidemics at Wilmington, Key West, Dry Tortugas and Florida. Then served in the Indian wars under General Crook until 1876, after that time settled in Prescott, Arizona, where he still remains a prominent and honored citizen, in vigorous health and active service.

JOHN H. DEWITT was valedictorian of the spring class, exercises being held in the old Assembly Chamber. He moved to Saugerties, entered upon the practice of medicine, and has continued in the work up to the present time. He occupies an honorable position in the community, and is highly respected by all his fellow citizens.

EDWARD MARCUS GOODWIN, of the December class, entered the naval service as Assistant Surgeon, serving in the North Atlantic and Mississippi squadrons, and remained in service until October, 1865. In 1866, went to Toledo, O., entering practice, where he still remains, honored by the community in which he lives.

D. S. HARDENBERG is at Jersey City, but unable to reply, as he is suffering from a paralytic stroke, occurring on March 18th.

JOHN HOTALING settled in Gallupville in 1863, and has steadily practiced in that place since. He has had a successful life and now enjoys the fruit of his labors and the honor of his community.

J. A. HUBBARD entered practice at Waconda, Ill., after graduation, remaining twenty years, then removed to E. Dubuque, where he remained until a year since, then giving up practice and moving to Mason City, Iowa, to enjoy the sunset of life as best he may. He advises all physicians over sixty to rest and enjoy the fruit of their labors.

E. VINE STODDARD entered service immediately on graduation, joining his regiment before Fredericksburg. From that time, was present in all the important engagements of the army of the Potomac, Gettysburg, Wilderness, Petersburg and the Shenandoah. At termination of service, settled in Rochester, where he still remains. He filled the chair of Materia Medica and Hygiene in the Medical Department, University of

Buffalo, for seventeen years, as well as other important state and society offices. Is at present a member of the State Board of Charities.

R. C. TUTTLE entered the Naval service on graduation, remaining until September, 1866. He then settled at Rockland, Sullivan county, continuing in practice until 1893, when, by reason of ill health, he was obliged to retire, and settled in Roscoe, N. Y., where he is still residing.

A. T. VEEDER is in Pittsburg, Pa., following a special line of work in treatment of the nose, ear and throat, and he states, "Very rarely using the spray or the nebulizer, operating conservatively, I trust, when I should and radically when I ought." He is apparently enjoying the fruits of his labors and the good things of this world.

E. E. VAN DE WARKER entered service on graduation as Assistant Surgeon, was promoted to Surgeon before expiration of service, then settled in Syracuse, where he has since remained. He has obtained considerable prominence in his profession in local, national and foreign associations, and is at present a commissioner of education of the city, and is highly respected by his fellow citizens.

It is very interesting to classmates to hear of and from each other after forty years of separation, but not of such great interest to strangers, as are most of you to-day, to those of whom I speak. This admonishes me to be as brief as possible, and I shall therefore close with a few extracts from the letters received.

One writes, "I suppose it would be a pertinent question to ask an alumnus of forty years practice, what he thinks of the practice of medicine. My answer would be, that I regard it as a noble life work, worthy of the best there is in the best of men—the profession par excellence."

Another writes, "Your letter recalls the day of my graduation, May 3, 1863, and plainly brings before me the faces and forms of those who composed the faculty of the Albany College. Professor March, the nestor of the surgeons of his day, his brightness, his activity, his dutiful devotion to his profession."

"James McNaughton, then growing old in service, with silver locks, his eye undimmed, still scintillating with wit and intelligence."

"Professor Townsend, the learned and polished gentleman, and Armsby, who, in his instructive lectures, rose at times to heights of classic eloquence, clothing even the dry bones of anatomy in beauty; and Quackenbos, making the science of obstetrics sacred in terms of effusive and refined rhetoric. All are now dead. May their names and memories long be cherished and remembered.

Knight Errants of the healing art"

"Their good lance rust,

Their souls are with the saints we trust."

Another writes, "Never had but one elective office and it was enough. Neither honor nor profit to a physician."

And still another writes, "Do you remember the fire crackers in the old wood burning stoves in the chemical lecture room, and the crime of the horse chestnuts, when bushels of them came cascading down the steps at lecture, the old quiz class that met in the student's library, and the beer

from Mrs. Murphy's over the way? Why don't beer taste like that now? Well, I am getting old, and the savor is getting out of life and the foam off my beer; but I can see it all, standing out on the background of the night like a Silhouette, a sweet and tender memory, ever growing darker and more solemn, but not less dear as the relentless years roll on."

Letters to Wm. N. Hendrickson, Lompoc, Cal., were returned from the postoffice.

No response has been received from Wm. N. Bonesteel, Wm. Alonzo Carson, Henry C. Cotton, S. B. Irwin, Joel H. Mead, Richard T. Mead, and Phineas S. Rose.

ALBERT B. HUESTED, *Historian of the Class of 1863.*

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### HISTORY OF THE CLASS OF 1873.

DR. D. H. COOK, of 264 Clinton avenue, Albany, N. Y., states, "That it has been his pleasure to attend each annual meeting for the last ten years, with one exception, when prevented by illness," the late Doctor Van Vranken and himself for many years being the only representatives of the class, and during the past five years Doctor Cook has been alone.

DR. W. S. SHIELDS, of Marion Center, Pa., states, "That he is still at the same place as ten years ago, not doing much practice, not being at all rugged, or strong; is attending the drug store, during the absence of his son, who is at the College of Pharmacy at Pittsburg, Pa."

DR. I. H. LENT, of 30 Roberts street, Middletown, N. Y., states, "That after graduation he received an appointment to the Albany Hospital, remaining until July, 1874; then located at Valatie, Columbia county, N. Y., continuing practice there until April, 1896; then removed to Middletown, N. Y., where he has been in practice until the present time."

DR. WM. GEOGHAN, of 78 West Eighty-second street, New York: "Immediately on graduating, I commenced practice in connection with my father in Albany, until the year 1883, when I came to New York City, where I have remained in general practice. While in Albany, served as county physician and physician to the Albany County Penitentiary, and in New York City served on the Board of Health, as medical examiner to the Department of Street Cleaning, and as medical examiner to the Municipal Civil Service Commission."

DR. J. H. CARMICHAEL, of 41 Maple street, Springfield, Mass., states, "That after thirty years of practice he has perfect health and great endurance. Has practiced in several places, mainly Worcester, Boston and Springfield. After practicing five years in Worcester, went to New York and spent the winters of 1878 and 1879 under the teaching of Drs. T. Gaillard Thomas and T. Addis Emmett. Returned to Worcester in June, 1879, where he begun to do abdominal surgery, which he did successfully, being the first in that city to do abdominal work and the fourth in New England. Success was so great that he was in 1883, induced to go to Boston, where he practiced surgery as a specialty until 1884. Seventeen months after removing to Boston, his health failed, the east winds developing a congested condition of bronchial mucous membranes. After



losing 36 pounds and becoming a chronic cougher he again moved inland and took up general practice at his present home; here after nineteen years he has made a decided reputation. He is surgeon-in-chief of Hampden Homeopathic Hospital.

DR. E. M. DRAPER, of Pasadena, Cal.: "The day after graduating he opened an office in Ilion, N. Y., continued to practice there until October last. In 1894, he took a course at the New York Post Graduate Hospital, and found it very profitable. For the past ten years has been Consulting Physician to St. Luke's Hospital, Utica, N. Y.; and Lecturer to the Training School for Nurses. On account of the doctor's wife's health they went to California, where he is enjoying life, not practicing, but obtained a state certificate to enable him to at any time.

DR. H. B. WHITEHORNE: After graduation, located at Verona, in Essex county, New Jersey, where he has resided ever since. Has had fair success as a practitioner, being steadily at work, but has not been fortunate in laying up much money. Has for many years been visiting physician to the Mountainside Hospital, in Montclair, N. J. Also to the Essex County Penitentiary and Newark City Home, a reformatory institution, under the control of the city of Newark. Is a member of the Essex District Medical Society, the Orange Mountain Medical Society, and is in harmonious relations with his neighboring professional brethren.

Respectfully submitted,

H. B. WHITEHORNE, M. D.

## HISTORY OF THE CLASS OF 1883.

### *Mr. President and Gentlemen of the Alumni:*

NEWTON E. HEATH remained in Albany for five years after graduating, then settled in Stockbridge, Mass., where he had considerable success in surgical practice. After seven years in Stockbridge, removed to Troy, N. Y., to take charge of the surgical work of Dr. Thompson, but after a few months started a dispensary of his own, treating about 2,000 cases a year. Owing to his wife's failing health returned to Stockbridge where he resumed his former practice, but on the death of his father removed to Lee, Mass., in order to take charge of father's estate, where he has remained to the present time. Is now trying to start a hospital for the benefit of railroad employes, of whom there are many in Lee. Is the father of two bright boys and hopes to meet old classmates on Alumni Day.

FRANK L. SMITH is located at Bridgeport, Conn., where he is successfully practicing his profession. Reports a life of hard work and states that he has always tried to live up to the traditions of the A. M. C. and to keep abreast of the progress of medical science, would be glad to meet his old classmates.

JAMES G. W. ENTWISTLE states that he is located at Englewood, Chicago, Ill., and reports self and family in good health. Knows that he is grow-

ing older because there is a seven-year-old boy who calls him grandfather, who, he hopes, will some day graduate from the Albany Medical College.

JOHN H. SKILLICORN, Albany, N. Y., reports that he is compiling a history of his twenty years experience as a physician, which he hopes to have completed by the time of our decennial reunion.

JAY D. VAN WIRT changed locations several times and located at Boyntonville. In 1888, finally removing to Johnsonville, where he is at present. Was married in 1883, but a few years later his wife died leaving him with one son. Has since remarried and has a lucrative practice.

GEO. A. BRADBURY reports that he is still located at the same place as at our former report, but by legislative enactment, his address is now "Troy," instead of "Lansingburgh." His wife died in 1895, and he then became a traveler, visiting nearly every European country and parts of Asia and Africa. After a few years married again and resumed active practice at his former location.

CHARLES F. WHARTON is located at Summit, N. Y., where he has practiced ever since graduating, with the exception of four years. Is the only physician in the place and has a large territory to ride over. States that while he has not amassed any great amount of the yellow dust he is in comfortable circumstances and endeavoring to extract as much enjoyment from life as he possibly can. Is married and has a boy of ten years.

IRVING D. LE ROY traveled for a time after graduating and then took a post graduate course at the New York Polyclinic and then established a general practice at Poughkeepsie, N. Y. Afterwards removed to Pleasant Valley, N. Y., where he is at present. Has taken considerable interest in medical organization and local health affairs. Is President of the Dutchess County Medical Association, a founder of the New York State Medical Association, and a permanent member of the American Medical Association.

CHARLES P. McCABE located at Greenville, N. Y., where he entered into partnership with his father (Class of '50), and while he has no great achievements to boast of, thinks he can claim to have done twenty years of hard work. Married Helen F. Elliot in 1884, and has two children, a son and daughter. He has always taken an active interest in local affairs and has been elected supervisor of his town. Has served three terms as Master of J. M. Austin Lodge, No. 557, F. A. M., and was first Chancellor of Commander Lodge, No. 360, K. of P. Hopes to meet all his old friends, class of '83.

HERBERT L. ODELL. Located at Hobart, N. Y. Married Eva L. Hoose, of Hobart, May 13, 1885; has three daughters, aged 16, 14 and 9 years respectively. Formed a co-partnership with Dr. J. S. McNaughton, drug store and practice, in 1886, and continued it until 1892, when he removed to Sharon Springs, where he has built up a large practice. Has served as Censor, Secretary, Vice-President and President of the Medical Association of Delaware county, and has filled the later offices in the Medical Association in Schoharie county. Has been health officer of the towns of Stamford, Kortright and Sharon, and of the village of Hobart and Sharon Springs. Is medical examiner for nearly all the old line life insurance

associations. Is county delegate to the Medical Association of New York State. Hopes to meet all the surviving members of the class of '83 in Alumni Hall at the decennial reunion.

ISRAEL M. SLINGERLAND. Located at Fayetteville, N. Y. Has been twice married and has two children—daughters. In 1893 took post graduate course in Chicago, and in 1898 at New York City. Has enjoyed a good practice and accumulated a fair share of this worlds wealth as a reward. States that he is still blessed with the same excellent health as at our last report, and prays that all good fortune may attend his old classmates of '83.

WILLIAM L. SCHUTTER is located at Albany, N. Y., and reports that he is practicing his profession with a fair degree of success. Hopes to meet with all the "Old Boys" on Alumni Day.

ALFRED M. LEONARD is located at Cicero, N. Y., where he has been since 1892. Suffered much from ill health during several years after graduation, but is now in good health and enjoying a fairly remunerative practice.

FRANK T. DE LANO reports that he engaged in the retail drug business in his native town, Ticonderoga, N. Y., until September, 1884, when he located at Crown Point Centre, removing six months later to Westport, N. Y., where he soon obtained a good practice. Remained at Westport until 1893, when he removed to Rockville Centre, L. I., where he still resides. Is pleasantly situated in a thriving suburban town just outside New York City limits and has a good practice. Married Kittie M. Ingalls soon after graduating and has three children.

LOUIS N. LANEHART is located at Hempstead, L. I., where he is now convalescent after a very severe operation. Has acquired the reputation of a very skillful surgeon. (This report by courtesy of Dr. DeLano, who is located but a few miles from Dr. Lanehart.)

ALLEN R. THOMPSON resides at No. 5 Clinton place, Troy, N. Y., and is now county clerk of Rensselaer.

THEOBALD SMITH is located at Forest Hills (Boston), Mass. Has been connected with the Medical Department of Columbian University as lecturer on bacteriology and hygiene and his services in comparative pathology have been recognized by the Association of American Physicians who have elected him a member. Dr. Smith has acquired a wide reputation for scientific research in the lines of medical science.

J. WILSON POUCHER is located at Poughkeepsie, N. Y. Has not the time to write an extended history but states that he is still "doing business at the old stand," and hopes to be present at the reunion and meet the "boys" of '83.

J. H. STEPHENS writes that he is located at West Winfield, N. Y., where he has resided for the last fifteen years and expects to remain while in practice. Family consists of wife and two children.

MARTIN J. DWYER is located at No. 527 West One Hundred and Sixty-second street, New York City. States that he will try to meet the "boys" of twenty years ago on Alumni Day, but should circumstances prevent him from so doing trusts he will be remembered by those who are fortunate enough to be present. Has a wife and two boys and quotes his wife as being opposed to the "boys becoming Doctors."

WILLIAM S. DONNELLY, your historian, has been located at Ketchum's Corners since 1885, and has acquired a fairly lucrative practice. By force of circumstances has been led into local politics to a limited extent. Has represented his town in the county legislature since 1897, was chairman of the board in 1901, and is now serving his fourth term. Is a member of the State and Local Medical Associations. His family consists of wife and one child, a boy twelve years old, whom the father hopes will some day be a member of the Alumni of the Albany Medical College.

Respectfully submitted,

WM. S. DONNELLY, M. D.

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### HISTORY OF THE CLASS OF 1893

EDWARD J. BEDELL, commenced practice at Selkirk, N. Y., served as Health Officer 1897, 1898 and 1899 elected supervisor in 1899 and again in 1901; served one year as Coroner's Physician. Has been successful in practice. Is married and has one child.

JOHN B. BEEBE is practicing in Great Barrington, Mass.

EDWARD M. BELL after graduating located in Cohoes, N. Y., where he has remained doing a good general practice. Has served as Coroner's Physician and School Commissioner and is now on staff of Cohoes City Hospital.

LEWIS N. BUMP, after graduating spent the summer at home after which he practiced for six months in Omaha, Neb. Illness compelled him to return to the East and in December, 1894, opened his office in Somerville, N. Y., where he is now in active practice. Is married and has two children.

EDWARD G. COX has practiced ever since his graduation in Albany, N. Y., making surgery his specialty. Is attending surgeon to the Homeopathic Hospital and surgeon to the Police Department

ORVILLE CURTISS, served one term in Albany Hospital, going from Albany to Long Island, where he remained eight months. From there he removed to his present location, Buchanan, Mich. Is doing a good deal of surgery in connection with a successful general practice. Has never married.

HERBERT E. DE FREEST is practicing in Troy, N. Y. Is married, but has no family.

ROBERT E. DORAN entered Albany Hospital as interne. In February, 1895, was appointed Assistant Physician at Willard State Hospital, remaining there until December, 1901, when he was appointed First Assistant Physician at Craig Colony for Epileptics at Sonyea, N. Y., which position he now holds. Is married and has two children.

ADEN C. GATES spent a few months in the drug business and then located for practice at West Hurley, N. Y., doing a good practice for three years. After taking a post graduate course in New York, again entered practice in Catskill, N. Y., remaining there until summer of 1897. Has



since practiced in Kingston, N. Y., where he is doing a good general practice. Is a member of the staff of the Kingston City Hospital.

JOHN S. GUINAN, after graduating remained at the Albany County Hospital for one year and then practiced a year in Albany, removing to Whitehall, N. Y., where he is at present.

ROBERT A. GRANT is in practice at Arctic Centre, R. I.

AUGUSTUS A. GUY is practicing in Harpersville, N. Y.

CHARLES W. HAMM entered partnership with Dr. Wm. Hull at Poes-tenkill, N. Y. Dr. Hull died a few months later and Dr. Hamm continued the practice. Removed to Troy, N. Y., in 1901. Is now serving as Coroner. Is married and has one child.

AMOS W. HEDDEN is practicing in Syracuse, N. Y., doing a good business. Has given special attention to gynaecology and surgery. Is married but has no children.

CHARLES H. HERRICK began practice in Gilbertsville, N. Y., where he is now located. In November, 1894, married Miss Gertrude Clark, of Gilbertsville, and has two children. Has served as Village President and Member of Board of Education, and is examiner for several leading insurance companies.

LEROY F. HOLLIS, after graduating practiced four years in Minetto, N. Y. Afterwards moved to Lacona, N. Y., where he is now located.

ANSELME E. HOULE practiced in New Hampshire and Massachusetts. A few months ago removed to Bennington, Vt., succeeding Dr. J. W. Racette, '93. Is married and has one child.

WARD E. HUNT is practicing in Little Falls, N. Y.

GEORGE H. JANES is at present located at Westfield, Mass., where he has been since graduation. He has all the business he can care for and is an attending surgeon to Noble Hospital, as well as Medical Examiner for Hampden county.

THOMAS W. JENKINS writes that after serving a term as interne at Albany Hospital and spending one summer in post graduate study, he began the practice of his profession in Albany, where he is now located. Is surgeon to Albany Hospital Dispensary, Instructor of Anatomy in the College, and Lecturer on Microscopy in the College of Pharmacy. Has also served as Instructor of Histology and Pathology in the College. Married Miss Mary Davis, of Scranton, Pa., in 1887.

JOHN JONES died October 23, 1897, aged 35 years.

FISHER M. JOSLIN is practicing very successfully in Voorheesville, N. Y.

WM. H. LAUGHLIN has successfully practiced in Milltown, N. B., since graduating. He is now Health Officer, Town Physician, Attending Surgeon to a large manufacturing concern, Attending Physician to Chipman Hospital at St. Stephens, N. B., and very active in Masonic and Pythian circles, having been District Deputy Grand Master in the Masonic Order. Has taken courses in a military school and holds a captain's commission in the Canadian militia. Is married and has four children.

EDWARD M. LEACH, located at Rockdale, Mass., where he is still in active practice.

JOHN B. LEDLIE is practicing in Saratoga, N. Y.

PATRICK T. MARKEY is located in Schenectady, N. Y.

CHARLES E. MARSHALL is doing the medical work for the Homestake Mining Company, at Lead, South Dakota.

THEODORE MORRISSEAU, last located at Warren, R. I.

FLAVIUS PACKER is acting as Superintendent of the Insane Pavilion, Bellevue Hospital, New York City.

SAN CROMBIE PO went back to his native country, Burma.

JOSEPH W. RACETTE begun his practice in Bennington, Vt., where he remained until December, 1902, removing to Schenectady, N. Y., where he is now located. Is married and has three children.

MARTIN S. REID is located at Coeymans, N. Y., having practiced in Indian Fields, N. Y., until March, 1901. Is married and the father of two boys.

COLLIE J. ROBINSON is practicing in Northville, N. Y., where he has been ever since graduating. He served one year in St. Peter's Hospital in Albany.

GEORGE L. RICHARDSON has not reported.

GEORGE F. ROGAN, residence unknown.

JOHN W. RUSSELL is located at Willard, N. Y.

THOMAS A. RYAN, after graduating, opened his office in Albany, where he is still located. Has been very successful in his profession.

WALTER B. SABEY began his practice in Albany, but in June, 1894, went to Ravena, N. Y., where he has built up a good general practice. Has two children.

FRANK B. SANFORD located in Morley, N. Y., where he is at present enjoying a good practice. Has been married three years but has no family.

WILLIAM C. SEBRING began his practice in Searsville, N. Y., remaining there nine months and moving to Pine Bush, N. Y., where he practiced until 1898. After a post graduate course he located in Kingston, N. Y., where he now resides.

MELVIN SHELDON has been in practice at Ancram, N. Y.

JOSEPH B. SWEET, JR., practiced in Albany, making a specialty of Obstetrics, until October 3, 1897, when he died.

ROBERT H. TEDFORD has been in active practice since graduation; the first six months in Brooklyn, N. Y.; the second six months in Gloversville, N. Y., and since that time in Albany.

GEORGE H. VAN GAASBECK is in active practice in Kingston, N. Y.

FRED. D. VICKERS located in Canajoharie, N. Y., immediately after graduation and is still there enjoying good health and a good practice. Is a coroner of Montgomery county, married and has one son.

JOHN S. WADE is practicing at New Brighton, Pa.

PERCY G. WALLER, located at New Baltimore, N. Y., where he is still at work, doing a good general practice. He makes a specialty of X-Ray work. Has been Health Officer for the past three years and also served as Vice-President of the Greene County Medical Society.

WILLIAM W. WENTWORTH is practicing at Pittsfield, Mass.

C. W. HAMM, M. D., *Historian.*

The Nominating Committee then made the following report:

*For President,*

JOSEPH D. CRAIG, ('84), Albany, N. Y.

*For Vice-Presidents*

GEORGE J. HOLMES, ('82), New Britain, Conn.

J. WILSON POUCHER, ('83), Poughkeepsie, N. Y.

ISAAC H. LENT, ('73), Middletown, N. Y.

EARL D. FULLER, ('78), Utica, N. Y.

LEMON THOMSON, JR., ('82), Glens Falls, N. Y.

*For Recording Secretary,*

J. MONTGOMERY MOSHER, ('89), Albany, N. Y.

*For Corresponding Secretary,*

ANDREW MACFARLANE, ('87), Albany, N. Y.

*For Treasurer,*

ROBERT BABCOCK, ('84), Albany, N. Y.

*For Historian,*

EUGENE E. HINMAN, ('99), Albany, N. Y.

*For Members of the Executive Committee (term three years),*

WILLIAM J. NELLIS, ('79), Albany, N. Y.

ALVA H. TRAVER, ('98), Albany, N. Y.

CLEMENT F. THEISEN, ('92), Albany, N. Y.

JAMES F. ROONEY, ('98), Albany, N. Y.

On motion, the Secretary was directed to cast one ballot for the names contained in the report. The Secretary then read these names and President Scofield declared the members named in the report the duly elected officers of the Association for their respective terms.

No report was made on the Schuyler prize, as no essays

had been submitted. A telegram was received from Dr. William Frederic Holcombe ('50), regretting his absence. President Raymond, on request of the chair, addressed the Association. President-elect Craig was called and returned thanks for his election. Ex-President Henry D. Didama ('46), of Syracuse, was called upon and addressed the meeting. As there was no further business the meeting adjourned at 11:45 o'clock in order to permit the decennial classes to meet and hear their special reports.

### COMMENCEMENT EXERCISES

The seventy-second commencement exercises of the Albany Medical College were held at Odd Fellows' Hall, on Tuesday afternoon, May 6, 1903, at three o'clock, in the presence of a large audience. Rev. Dr. A. V. V. Raymond, President of Union University, presided, and upon the stage were seated the members of the Faculty, officers of the Alumni Association and prominent citizens.\*

The following was the

### ORDER OF EXERCISES

*Overture*—"King Dodo".....*Luders*

*Prayer*—REV. W. F. WHITAKER, D. D.

*Music*—SELECTION: "Sally in Our Alley".....*Englander*

*Essay*—J. HOWARD BRANAN

*Music*—'CELLO SOLOS "Romanze".....*Zippell*

MR. ARNOLD R. JANSER

### CONFERRING DEGREES

BY ANDREW VAN VRANKEN RAYMOND, D. D., LL. D.

Chancellor of Union University

*Music*—BARN DANCES "In Old Alabama".....*Dox Cruger*

*Address to the Graduating Class*—HON. JOHN CUNNEEN

*Music*—INTERMEZZO: "Hiawatha".....*Moret*

*Valedictory*—DONALD BOYD



## REPORT ON PRIZES AND APPOINTMENTS

DR. S. B. WARD

*Music*—TWO STEP: "Dixie Land".....*Haines*

The Graduating Class was as follows:

Samuel Halcomb Behrend	Basch.....	Rondout, N. Y.
Frederick Ernest Bolt.....		Masonville, N. Y.
Donald Boyd, A. B.....		Fonda, N. Y.
J. Howard Branan.....		Albany, N. Y.
John Edward Canfield.....		Johnstown, N. Y.
Henry Milligan Chandler.....		South Orange, N. J.
Sylvester Cornell Clemans.....		Gloversville, N. Y.
Russell Clute.....		Amsterdam, N. Y.
Herbert Thomas Crough.....		Canajoharie, N. Y.
Archie Irving Cullen.....		Watervliet, N. Y.
Archibald John Douglas.....		Southampton, Mass.
Louis Le Bell Dulberger.....		New York, N. Y.
Edwin Maurice Griffith.....		Steuben, N. Y.
Conrad Rowland Hoffman.....		Selkirk, N. Y.
R. Burdett Hoyt.....		Deposit, N. Y.
Frank Keator.....		Accord, N. Y.
Frederick John MacDonald.....		Watervliet, N. Y.
Charles Richard Marsh.....		Oneonta, N. Y.
Frank Clay Maxon, Jr.....		Chatham, N. Y.
Miles Ambrose McGrane.....		Watervliet, N. Y.
John Crapo Merchant, A. B.....		Nassau, N. Y.
Addison Robert Miller.....		Rensselaer, N. Y.
William Leo Mulcahy.....		Albany, N. Y.
Thomas Stephen Augustine O'Connor.....		Troy, N. Y.
Mark M. O'Meara.....		Plattsburg, N. Y.
Virgil Dural Selleck.....		Glens Falls, N. Y.
Millard Francis Shafer.....		Cobleskill, N. Y.
Edwin Forrest Sibley.....		Bennington, Vt.
Frank Templeton Smith.....		Troy, N. Y.
George Henry Humphrey Smith.....		Little Falls, N. Y.
James Newell Vander Veer, A. B.....		Albany, N. Y.
Isaac Ernest Van Hoesen.....		Coxsackie, N. Y.
Philip Wolfman.....		New York, N. Y.

Dr. Ward presented the prizes. He read a report on the Vander Poel prize, endowed by Mrs. Gertrude W. Vander Poel, in memory of her husband, the late S. Oakley Vander Poel, M. D., for many years a professor in the college, stating that this prize, consisting of a clinical microscope and accessories, offered to the senior student passing the best bedside

examination in general medicine, had been awarded to Dr. Archibald J. Douglas, and that at the competitive examination for house physicians and surgeons at the Albany Hospital the following appointments had been made: Drs. Archibald J. Douglas, Frank Keator, Donald Boyd, Conrad R. Hoffman, James N. Vander Veer, Isaac E. Van Hoesen, Edwin F. Sibley.

The prize offered by Drs. Vander Veer and Macdonald for the best report of the surgical clinics was awarded to Dr. Miles A. McGrane. For the second best report of these clinics, the prize offered by Drs. Hailes and Morrow was awarded to Dr. Sylvester C. Clemans.

The prize consisting of an ophthalmoscope, offered by Dr. Merrill for the best report of the eye and ear clinics, was awarded to Dr. Sylvester C. Clemans.

The Townsend Physiological prize endowed by the late Professor Franklin Townsend, Jr., M. D., was awarded to Mr. Morey C. Collier, for passing the best examination in physiology at the end of the first year of study.

Dr. Boyd's prize to the student passing the best final examination in obstetrics was awarded to Dr. Frank Keator.

The prize consisting of a case of surgical instruments, offered to the senior student passing the best final examination, by the late Dr. T. W. Nellis, was awarded to Dr. J. Howard Branan.

The prize offered by Dr. H. R. Powell to the second-year student passing the best final examination, consisting of a general operating case, was awarded to Mr. Joseph V. Garlick.

A prize consisting of Gross' complete pocket case of instruments, offered by A. B. Husted & Co. to the first-year student passing the best final examination, was awarded to Mr. Theodore F. Doescher.

Dr. Bigelow's prizes for the best dry preparation of the nose and nasopharynx were awarded to Drs. R. Burdett Hoyt and Conrad R. Hoffman.

Dr. Blumer's prize, consisting of a microscope and accessories, to the second-year student presenting the best record for laboratory work in pathological anatomy, was awarded to Mr. Harry Rulison.

The Daggett prizes, consisting of eighty and forty dollars, respectively, for the best "anatomical specimens," were awarded to Drs. R. Burdett Hoyt and Wallace T. Shafer.

The Daggett prize for the best "deportment irrespective of scholarship," consisting of eighty dollars, was awarded to Dr. Russell Clute, and the second prize, consisting of forty dollars, was awarded to Dr. John C. Merchant.

### THE ALUMNI DINNER

The thirtieth annual dinner of the Alumni Association was held at the "Ten Eyck," on Tuesday evening, May 5, 1903, at half-past eight o'clock. One hundred and forty-four were present, including members of the Association, the guests, and members of the graduating class.

After the tables had been cleared and cigars passed, the following toasts were responded to, Dr. Herman Bendell acting as toastmaster:

1. "Our Alumni Association," Dr. Walter W. Scofield.
2. "The Faculty of the Albany Medical College," Dr. George Blumer.
3. "The Medical Profession," Dr. Maurice J. Lewi.
4. "The Clergy," Rev. Dr. W. F. Whitaker.
5. "The Legal Profession," Rollin B. Sanford, Esq.
6. "From the Patients' Point of View," Hon. William H. Wood.
7. "Our First President," Dr. H. D. Didama.
8. "The Class of 1903," Dr. Edwin F. Sibley.

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### COURSE FOR PHYSICIANS

During June Dr. Blumer will give in Medical Microscopy to a few physicians. Those desiring particulars may apply to Dr. Blumer at the Bender Laboratory.

## Editorial

The terrible crowd with which these halls and galleries were filled, so shocked me, that I abridged my stay within the shortest limits, and declined to see that portion of the building in which the refractory and violent were under closer restraint. I have no doubt that the gentleman who presided over this establishment at the time I write of, was competent to manage it, and had done all in his power to promote its usefulness; but will it be believed that the miserable strife of party feeling is carried even into this sad refuge of afflicted and degraded humanity? Will it be believed that the eyes which are to watch over and control the wanderings of minds on which the most dreadful visitation to which our nation is exposed has fallen, must wear the glasses of some wretched side in politics? Will it be believed that the governor of such a house as this, is appointed, and deposed, and changed perpetually, as parties fluctuate and vary, and as their despicable weathercocks are blown this way or that? A hundred times in every week, some new most paltry exhibition which is the simoon of America, sickening and blighting everything of wholesome life within its reach, was forced upon my notice; but I never turned my back upon it with feelings of such deep disgust and measureless contempt, as when I crossed the threshold of this madhouse.

CHARLES DICKENS

*American Notes*

**One Kind of Progress**      The ANNALS has received, through the courtesy of the New York State Commission of Lunacy a copy of Chapter 146, Laws of 1903, entitled:

An Act to amend the insanity law, relating to the temporary commitment of insane persons to institutions for the insane without an order of the court, and providing as to clothing worn by patients committed to state hospitals.

This is a modification of the existing lunacy statute which has required a judicial order before the admission of any person to an institution for the insane. The phraseology of the amendment is indicated in the circular issued by the Commission in Lunacy in italics as follows:

Notwithstanding the requirements of this section that an alleged insane person be duly committed by an order of the court, in a case where the condition of such person is such that it would be for his benefit to receive immediate care and treatment, or if he is dangerously insane so as to render it necessary for public safety that he be immediately confined, he shall be forthwith received by a state institution authorized by law to care for the insane. In such case such insane person shall be so received by such institution upon a certificate of lunacy, executed by two medical



examiners in lunacy after the examination and in the manner provided in the preceding section, and upon a petition made by the person authorized by this section to apply to a court for an order of commitment. By virtue of such certificate of lunacy and such petition such insane person may be retained in such institution for a period not to exceed five days. Prior to the expiration of such time an order for his commitment must be obtained in the manner provided by this section. The certificate of lunacy executed by such physicians must contain adequate reasons why the insane person should be immediately received in an institution for the insane for treatment. The superintendent or person in charge of any such institution may refuse to receive such insane person upon such certificate and petition, if in his judgment the reasons stated in the certificate, or the condition of the patient, are not sufficient, or is not of such character, as to make it necessary that the patient should receive immediate treatment.

This legislation will be greatly appreciated by the friends of insane patients who see the prospect of recovery in prompt treatment, and who for years have witnessed the chances of recovery diminishing during the complicated process of commitment and the delay resultant upon legal technicalities.

This was because of the popular bugaboo of conspiracies for the seizure and incarceration of innocent persons in the cells of lunatic asylums, against which not even a State Commission in Lunacy is proof. We have personal knowledge of the kidnapping of an insane man from an asylum, but we have never heard of a plot for the commitment of a sane person, and we do not believe that the record of the hundreds of thousands of commitments in English speaking communities will reveal a case.

But this legislation is interesting from another standpoint—that of history. In 1874 the first general lunacy legislation of the state was enacted. Under Chapter 446 of the Laws of that year, lunacy proceedings were regulated and this law remained in force until the accession of the State Commission in Lunacy in 1889. The Law of 1874 provided for the admission of patients to institutions for the insane for a period of five days upon the certificate of two physicians in exactly the same way as enacted by the amendment to the law this year. All this was changed by the State Commission in Lunacy for the reasons given in their second annual report for 1890 as follows :

The act also provided that a person might be held in an asylum for five days without a certificate that had been approved by the judge. This was unquestionably based on the theory of permitting urgent cases to be received into an asylum without waiting to get the approval of the judge. It needs hardly to be pointed out that, assuming that there is danger of a sane person being confined illegally, for many purposes five days or

even one day's detention would be as injurious as a hundred. Moreover, the commission believes that experience has shown that there is no practical necessity for permitting this course to be pursued. Undoubtedly it was not supposed that such a course would often become necessary. Experience shows that from it great trouble and annoyance have been experienced, because a statute, especially one which deprives a person of liberty, must be strictly construed. Patients are often brought to an asylum and the medical certificate is not approved within five days. Every moment's detention beyond that time is illegal. Moreover, it becomes necessary to discharge the patient, to procure his re-examination, and finally an approval. All this could be obviated by requiring the approval to be had in the first instance before the reception of the patient. Certainly it would seem that the state should not be put to trouble and expense in order to subserve an occasional convenience. If the restriction of requiring a judge who lives in the country or district to approve a medical certificate is removed, most if not all of the objections to the proposed change would disappear.

As physicians we are grateful to the law makers for this recognition of the therapeutics of mental disease. Its suspension for thirteen years has hardly been creditable to the "centralization" plan. It now begins to look as if experience is dearly bought, and that the organization of an expensive commission, the employment of a regiment of clerks, the adoption of bureaucratic methods and the expediture of a great amount of money have merely demonstrated that we were all right before.

## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, APRIL, 1903

### *Deaths*

	1901	1902	1903
Consumption .....	23	20	21
Typhoid fever .....	2	1	2
Smallpox .....	0	3	0
Measles .....	2	0	0
Whooping-cough .....	0	1	0
Diphtheria and croup .....	5	0	2
Erysipelas .....	0	1	2
Grippe .....	3	0	0
Cancer .....	4	10	4
Broncho-pneumonia .....	2	4	3

	1901	1902	1903
Pneumonia .....	12	8	12
Apoplexy .....	14	6	16
Bright's disease .....	11	17	16
Accidents and violence.....	13	9	13
One year and under.....	17	14	12
Seventy years and over.....	21	27	32

*Deaths in Institutions*

Albany City Hospital .....	12	16	18
Albany Orphan Asylum .....	0	1	0
Child's Hospital .....	0	1	0
County House .....	1	4	6
Home for Aged Men.....	0	1	3
Home for Friendless .....	1	2	0
Homeopathic Hospital .....	1	0	6
Hospital for Incurables .....	1	0	0
Little Sisters of the Poor.....	3	0	1
Public places .....	4	0	2
St. Vincent's Female Orphan Asylum....	0	0	1
St. Peter's Hospital .....	3	4	3

Total number of deaths for April, 1903, 168; death rate 18.39, less non-residents, 17.18; total number of deaths for April, 1902, 136; death rate, 14.89; total number of deaths for April, 1901, 156; death rate, 17.08.

Births at term .....	110
Premature .....	2
Still .....	9
<hr/>	
Total .....	121
Marriages .....	66

WORK OF HEALTH PHYSICIANS

Total number of assignments .....	89
Total number of calls made .....	281
Vaccinations .....	3

INSPECTIONS

During the month there were 82 markets inspected, 2 fish markets, 12 fish venders, 3 meat venders, 2 ice wagons, 1 cow stable, 20 milk peddlers' wagons. There was found 1 milk peddler's violation. Five samples of milk were taken and 10 tests were made, all of which were found to be up to or above the standard.

In the Bureau of Sanitation 50 inspections were made and 25 re-inspections. Seven privy complaints were investigated, 5 closets, 2 drains, 8 plumbing, 1 wells and cisterns, 4 water, 1 filthy yard, 1 filthy alley,

1 filthy cellar, 2 vacant lots, 7 filthy premises, 1 stable, 2 chickens, 5 garbage, 1 smoke and 3 unclassified. Eleven complaints were found to be without cause and 9 nuisances were found to be abated. Nineteen notices were served:

In the Bureau of Plumbing 196 inspections were made, of which 125 were of old buildings and 71 of new buildings. Thirty-two iron drains were laid, 34 connections with street sewers made, 36 tile drains, 2 urinals, 21 cesspools, 39 wash basins, 34 bath tubs, 21 wash trays, 14 trap hoppers in yard, 74 tank closets and 1 stable wash stand. 118 permits were issued, of which 85 were for plumbing and 33 for building purposes. Twenty-eight plans were submitted, of which 6 were of old buildings and 22 of new buildings. Five houses were tested on complaint; 3 blue tests and 2 peppermint tests. Six water tests were made. Twenty-one houses were examined on complaint, 21 re-examined. Sixteen complaints were found to be valid and 5 without cause.

### CONTAGIOUS DISEASES

#### *Cases Reported*

	1901	1902	1903
Typhoid fever .....	3	9	4
Scarlet fever .....	15	2	10
Diphtheria and croup .....	74	29	22
Chickenpox .....	7	9	6
Measles .....	60	27	134
Whooping-cough .....	2	1	2
Consumption .....	1	0	2
Number of days quarantine for diphtheria:			
Longest..... 42	Shortest..... 7	Average..... 22 $\frac{1}{2}$	
Number of days quarantine for scarlet fever:			
Longest..... 47	Shortest..... 15	Average..... 30 $\frac{1}{2}$	
Fumigations:			
Houses..... 30	Rooms..... 105		

### ANTITOXIN

Cases of diphtheria in which antitoxin was used.....	22
Cases in which antitoxin was not used.....	0
Total number of cases of diphtheria.....	22

There were two deaths from diphtheria; one was two years old, sick five days, and antitoxin was used on the third day (laryngeal); one was three years eleven months old, sick three or four days, and antitoxin was used nine hours before death (laryngeal).

### BENDER LABORATORY REPORT

Total number of cultures tested.....	57
Initial positive..... 11	Initial negative..... 32
Release positive..... 6	Release negative..... 8



## Society Proceedings

### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

The annual meeting of the Society was held in Alumni Hall, on Tuesday evening, May 12, 1903. The meeting was called to order at 8:45 P. M., the President, Dr. Ward, in the chair. The following members were present: Drs. Applebee, Archambault, Archibold, Babcock, Ball, Barker, Bartlett, Boyd, Carroll, Case, Classen, Curtis, Davis, Dawes, Elting, Featherstonhaugh, George, W. H., Giffen, Happel, Hennessey, Hinman, Jenkins, Keegan, Laird, Le Brun, Leavy, Lempe, Lochner, Lomax, MacFarlane, MacHarg, Mereness, Mitchell, Moore, C. H., Moore, J. M., Morrow, Mosher, Munson, Murray, Papen, Richardson, Rooney, Root, Ryan, Sabin, Sautter, Sheldon, Steenberg, Stillman, Traver, Tucker, Vander Veer, E. A., Van Slyke, Wansboro, Ward, Washburne and Wiltse.

1. *Reading of the minutes of the last regular meeting.* It was moved, seconded and carried that the minutes be adopted as printed in the ALBANY MEDICAL ANNALS for May, 1903.

2. *Reading of the minutes of special meetings.*

3. *Reception of reports of officers and committees.*

The treasurer, Dr. WILLIAM H. GEORGE, presented the following report:

ALBANY, N. Y., May 12, 1903.

*To the President and Members of Albany County Medical Society:*

*Gentlemen:*—The treasurer would respectfully offer the following report for the year:

Cash on hand at last annual meeting.....	\$230 92
Collections during the year.....	128 00
	<hr/>
Total.....	\$358 92
Expenses during the year.....	248 16
	<hr/>
Balance in bank.....	\$110 76

Respectfully submitted,

W. H. GEORGE, *Treasurer.*

It was moved, seconded and carried that a committee be appointed to examine the treasurer's account.

The CHAIR appointed Drs. Ball, Featherstonhaugh and Babcock as such a committee.

Dr. MOSHER, the chairman of the Board of Censors, presented the following report:

#### REPORT OF THE BOARD OF CENSORS

ALBANY, N. Y., May 12, 1903.

*To the Medical Society of the County of Albany:*

The Board of Censors respectfully submits the following report:

In our report presented at the last semi-annual meeting of the Society a statement was made of the action taken against an alleged illegal practi-

tioner of medicine. In response to a demand of the district attorney of the county this man had removed his sign and the incident was regarded as closed.

The case was reopened on March 6th last by a communication from the secretary of the State Board of Regents as follows:

REGENTS OFFICE, ALBANY, N. Y., March 6, 1903.

Dr. J. MONTGOMERY MOSHER,  
Albany, N. Y.

*Dear Doctor:* We have just received word from the authorities at the Royal University of Palermo that the Antonio Sorgi who completed his course in medicine and surgery at that institution and received their diploma is practising at the present time at Palermo. It appears, therefore, that as charged long ago the man who has been practising medicine here without a license under this name had made misrepresentations regarding his qualifications.

Kindly call this matter to the attention of the County Medical Society.

Very truly yours,

J. R. PARSONS, JR.

The original document is here and is at your service.

This was followed by a communication of the City Department of Health as follows:

ALBANY, N. Y., March 25, 1903.

Dr. SAMUEL B. WARD, President,  
Medical Society, County of Albany,  
Albany, N. Y.

*Dear Doctor:*—On April 16th, complaint was made to this office by Dr. F. Palmieri, who claims to be a regular licensed practitioner, that a Dr. Sorgi was practicing medicine at No. 49 Phillip Street, without a legal license and that he was using the name of Dr. Casella, regularly licensed to practice medicine in the city of New York, but not in the city of Albany. An inspector of this department interviewed Dr. Sorgi, who stated that Dr. Casella was actually living in his house until a few days ago and that he returned to New York City, where he is practicing at No. 507 Pearl Street, so that I think that we can dispose of that part of the complaint. The other complaint that Dr. Sorgi is practicing medicine at No. 49 Phillip Street, without registration, still remains without investigation.

If I remember rightly the County Society has a committee to look after cases of this kind, and I refer the matter to you for such action as you may think wise to make.

Respectfully yours,

JOSEPH D. CRAIG, M. D., *Health Officer.*

Dict. by J. D. C.

ALBANY, March 26, 1903.

Respectfully referred to the Censors of the Albany County Medical Society.

SAMUEL B. WARD, *President.*

ARTHUR W. ELTING, *Secretary.*

The contents of these communications were submitted to the district attorney and on April 28th the following acknowledgement was received from him:

COUNTY OF ALBANY, DISTRICT ATTORNEY'S OFFICE,

ALBANY, N. Y., April 28, 1903.

J. M. MOSHER, M. D.,

170 Washington Avenue, City.

*My dear Doctor:*—Owing to an unusual pressure of criminal business I have been unable to look into the matter contained in yours of the 3rd inst. until now. Dr. Sorgi was here and says that he has on file with the Board of Regents two certificates from the Royal University of Palermo. He makes an explanation about Dr. Casella practicing medicine at his house which seems all right. Kindly send me any evidence you have in regard to the matter and I will proceed to prosecute.

Yours very truly,

GEORGE ADDINGTON.

In response to this letter of the district attorney a personal interview was held with him and he stated that a complaint had been entered against the alleged Dr. Sorgi by Dr. Palmieri in the police court and had afterwards been withdrawn by the complainant. The district attorney then stated again that he would prosecute upon the presentation of evidence by our Society. The matter rests at this point.

The physicians' register in the County Clerk's office has been examined and the following physicians are found to have registered under authority of the University of the State of New York: Drs. Willis E. Merriman, Jr., Frank Augustus Hennessy, Moses Joseph Mandelbaum, John Henry Gutman and John McWilliams Berry.

Respectfully submitted,

[Signed]

J. M. MOSHER, *Chairman*,  
ANDREW MACFARLANE, *Secretary*,  
A. VANDER VEER,  
F. C. CURTIS,  
W. G. MACDONALD.

It was moved, seconded and carried that the report of the Board of Censors be adopted.

Dr. Roor, as chairman of the Legislative Committee, explained that a complete report could not be made, but that the Committee had interested itself in all matters pertaining to medical legislation which had appeared before the Legislature during the last session. They had taken especial interest in the bill providing for the registration of trained nurses. They

reported that this bill had passed both houses and had been signed by the Governor. There were no other bills of special local importance.

It was moved, seconded and carried that the report be accepted and placed on file.

4. *Election of members.*

The SECRETARY presented the names of Drs. La Salle Archambault, Harris Moak and John Giffen. He stated that the Board of Censors had reported favorably upon the names of these gentlemen and that they had complied with all the necessary requirements for election as members of the Society.

It was moved, seconded and carried that the Secretary cast one ballot for Dr. Archambault.

It was moved, seconded and carried that the Secretary cast one ballot for Dr. Harris Moak.

It was moved, seconded and carried that the Secretary cast one ballot for Dr. Giffen.

5. *Motions and resolutions.*

Dr. BALL stated that it had been an unwritten law in the Society that the delegates should pay the State Society dues, although there was nothing in the by-laws of the Society which regulated this. He believed that this was a bad custom, because when a delegate came to register he could not do so unless the entire amount had been paid in to the treasurer of the State Society. He therefore moved that hereafter the treasurer of the County Society be instructed to pay the sum of \$20.00 to the treasurer of the State Society at least one week before the State Society meeting.

Motion seconded.

Dr. DAVIS wished to amend this motion by having the treasurer charge each delegate's proportion of this sum to the delegate's personal account, and not to have the County Society made responsible for the dues.

Dr. BALL stated that it was practically the unanimous custom among other County Societies to pay the delegates' fees out of the funds of the Society, and he therefore did not wish to accept the amendment.

Dr. CURTIS believed that it was unwise to change the unwritten law of the County Society and felt that each delegate should pay his share of the dues.

The PRESIDENT called for a vote on Dr. Davis' amendment. The amendment was declared adopted.

The PRESIDENT then called for a vote upon the motion as amended, and declared it adopted.

6. *Miscellaneous business.*

7. *Amendment of by-laws.*

8. *The President's address.*

In the absence of the vice-president, Dr. Boyd, the President called upon Dr. Curtis to take the chair.

The President, Dr. SAMUEL B. WARD, presented his address, entitled, "Two Cases of Infective Endocarditis."



It was moved that the thanks of the Society be tendered Dr. Ward for his able address and that it be incorporated in the transactions of the Society. Motion seconded, carried.

*9. Election of Officers and Delegates.*

The PRESIDENT stated that there was no question about the number of officers to be elected, but that there did appear to be some question as to the number of delegates the Society was entitled to elect.

Dr. CURTIS stated that the Medical Society of the County of Albany was very fortunate in having in himself a final authority. He stated that there were nineteen names registered as delegates in attendance at the State Society. He further stated that Dr. Happel had never registered among the nineteen, and that inasmuch as three of the nineteen had been made permanent members and two had not qualified, there were five vacancies among the delegates from the County Society. Dr. Curtis then read the names of the delegates as registered in a small book possessed by himself.

Dr. MAC FARLANE enquired as to whether Dr. Van Rensselaer, whose name Dr. Curtis read among the nineteen, had not sometime since been made a permanent member of the State Society as a delegate from the Albany Medical College.

Dr. CURTIS consulted his book and finally stated that he believed that this was true, and in response to some further questions he stated that Dr. Happel had been made a permanent member of the State Society at its last meeting.

It was, therefore, determined that the County Society was entitled to elect five delegates to the State Society.

The PRESIDENT called for nominations for the office of President of the Society for the ensuing year.

Dr. ROOT said that there was a medical gentleman in Albany, for many years a member of this Society, known and esteemed by all, and how it had happened that he had not been made President before was a mystery. He took great pleasure in presenting for the presidency the name of Dr. Cyrus S. Merrill.

Dr. CURTIS stated that it was an anticipated pleasure to have nominated Dr. Root for president. He had learned last week that Dr. Root was a candidate for the office and he stated that he had been asked to nominate him. On Monday he had learned that Dr. Merrill was a candidate and he too had been surprised to learn that he had never been made president. He realized that no one in the Society could hope to win the presidency of the Society over such a captain of the profession as Dr. Merrill was. He felt, however, that Dr. Root could have been elected had he so desired, no matter what candidate might have been opposed, and he furthermore, felt that it was extremely magnanimous on the part of Dr. Root to have so gracefully withdrawn when he learned that Dr. Merrill was a candidate for the office. He wished to second the nomination of Dr. Merrill.

It was moved, seconded and unanimously carried that the Secretary cast the ballot of the Society for Dr. Merrill.

The PRESIDENT stated that the Secretary had cast one ballot for Dr. Merrill, and he therefore took great pleasure in declaring him the President of the Society for the ensuing year.

The PRESIDENT called for nominations for the office of Vice-President.

Dr. FEATHERSTONEHAUGH wished to put in nomination a favored and distinguished son of Cohoes, who had filled many offices of trust and emolument and who was the unanimous choice of the large delegation from Cohoes. He wished to present the name of Dr. John Archibold.

Dr. MACFARLANE stated that he believed the Cohoesians should have whatever they wanted, and as an evidence of the enthusiasm of the Society he not only wished to second the nomination, but he wished to move that the nominations be closed and that the Secretary cast the ballot of the Society for Dr. Archibold.

Motion seconded and unanimously carried.

The PRESIDENT stated that the Secretary had cast one ballot for Dr. Archibold and he took great pleasure in declaring him elected as Vice-President for the ensuing year.

The PRESIDENT called for nominations for the office of Secretary.

Dr. E. A. VANDER VEER wished to nominate Dr. Harry L. K. Shaw.

Dr. ROOT stated that it gave him great pleasure to second the nomination of Dr. Shaw. He stated that Dr. Shaw had filled the position of Secretary of the legislative committee with the greatest satisfaction.

It was moved, seconded and unanimously carried that the Secretary cast the ballot of the Society for Dr. Shaw.

The PRESIDENT stated that the Secretary had cast one ballot for Dr. Shaw, and he, therefore, declared him elected as Secretary of the Society for the ensuing year.

The PRESIDENT called for nominations for the office of Treasurer.

Dr. RICHARDSON wished to nominate Dr. William H. George.

Dr. WILTSE seconded the nomination.

It was moved, seconded and unanimously carried that the Secretary cast the ballot of the Society for Dr. George.

The PRESIDENT stated that the Secretary had cast one ballot for Dr. George, and he therefore declared him elected Treasurer of the Society for the ensuing year.

The PRESIDENT called for nominations for the office of delegate to the State Society.

Dr. CURTIS wished to nominate as delegate, Dr. Richardson.

Dr. BALL wished to nominate Drs. Wiltse, Lomax and MacHarg.

Dr. E. A. VANDER VEER wished to nominate Dr. A. H. Traver.

Dr. J. M. MOORE wished to nominate Dr. G. E. Lochner.

Dr. C. H. MOORE wished to nominate Dr. J. M. Moore.

Dr. MACFARLANE wished to nominate Dr. Lipes.

Dr. TRAVER wished to nominate Dr. James Rooney.

The PRESIDENT appointed as tellers, Drs. Mitchell, Carroll and Babcock.

Dr. MITCHELL reported the election of Drs. Wiltse, Lochner, Traver, Richardson and MacHarg.

The PRESIDENT declared these gentlemen elected as delegates to the State Society.

The PRESIDENT called for nominations for the office of censor, five of whom were to be elected.

Dr. BALL said, that inasmuch as the present Board of Censors were con-

ducting legislation against an alleged illegal practitioner, he believed that it would be wise to continue these gentlemen in office, and he, therefore, moved that the present Board of Censors be continued for the ensuing year.

Dr. CURTIS opposed the motion on the ground that it was out of order. He said that he was one of the present Board of Censors and did not want to be. He furthermore felt that the office should be given to some men who had not previously served. He therefore wished to nominate Drs. Murray, Happel, Steenberg, Traver and Dawes.

Dr. MERENESS said that he wished to second the nominations of an ancestor of the Society.

Dr. DAWES said that he could not think of serving as a censor and wished to withdraw his name.

Dr. HAPPEL did not wish to accept the nomination for the office of censor, because he had evidently cut such a poor figure when he had previously served that Dr. Curtis had not recollected that he had already filled the office.

Dr. MURRAY stated that he wished to withdraw his name for similar reasons.

Dr. BALL said that he wished that under the circumstances Dr. Curtis would withdraw his nominations.

The PRESIDENT then called for a vote upon the motion of Dr. Ball to continue the present Board of Censors in office for the ensuing year. Owing to the fact that there was one vote in the negative the President declared the motion lost.

Dr. CURTIS wished to withdraw his name from the nomination for the office of censor.

Dr. MACFARLANE wished to withdraw his name from the nomination for the office of censor and moved that the Secretary cast the ballot of the Society for the remaining five, namely, Drs. Mosher, Vander Veer, MacDonald, Steenberg and Traver.

The motion was seconded and unanimously carried.

Dr. BALL, on behalf of the Committee appointed to examine the Treasurer's report, begged to state that the examination showed it to be correct.

Dr. STILLMAN wished to move that a vote of thanks be tendered to the retiring officers, and especially to the Secretary, who had been indefatigable in his efforts, and who had left no stone unturned in his personal endeavors to make the year a successful one.

The motion was seconded and carried.

Moved to adjourn, seconded, carried.

ARTHUR W. ELTING, *Secretary*.

SAMUEL B. WARD, *President*.

## Medical News

Edited by Eugene E. Hinman, M. D.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR.—STATISTICS FOR APRIL, 1903.—*Classification of cases*: District cases reported by Health Physicians, 5; charity cases reported by other physicians, 35; patients of limited means, 31; old cases still under treatment, 30; total number of patients under nursing care, 101. *Classification of diseases* (new cases): Medical, 18; surgical, 6; gynaecological, 5; obstetrical, 22 mothers and 18 infants under professional care; dental, 2; one contagious disease in medical list. Transferred to hospitals, 6; deaths, 5.

*Special Obstetrical Department*: Head Obstetrician in charge of all cases. Medical students in attendance, 8; guild nurses, 5; cases, 6. Number of visits by the Obstetrician, 32; by the medical students, 35; by Guild Nurses, 42; total number of visits by this Department, 109. Visits of Guild Nurses (all departments). Number of visits with nursing treatment, 603; for professional supervision of convalescents, 205; total for the month, 808. Four graduate and three assistant nurses were on duty. Cases were reported by the City Physician, by three Health Physicians and by twenty-two other physicians and two dentists.

GRADUATING EXERCISES, TRAINING SCHOOL FOR NURSES.—The Class of 1903 of the Albany Hospital Training School for Nurses graduated Saturday, May 16, 1903. The exercises were held in the Female Academy and twenty-two young ladies took their places in the professional ranks. Dr. W. E. Ford, of Utica, N. Y., delivered the address, the diplomas being presented by Hon. Wm. L. Learned, of the Board of Governors of the Hospital. At the annual meeting of the Alumnae of the Training School, held at the hospital, May 16, 1903, the following officers were elected: President, Miss Lansing; First Vice-President, Mrs. L. Vanderzee; Second Vice-President, Miss MacIntyre; Secretary, Mrs. James Le Gallez; Treasurer, Miss Lord; Executive Board, Miss Lansing, Miss MacIntyre, Miss Lord, Miss Swartout and Mrs. P. Ostrander.

THE ALBANY FREE DISPENSARY ASSOCIATION.—The annual report of the work done at this institution has just been published and the fact that in two years, 14,117 treatments were given and 12,321 prescriptions dispensed is sufficient to demonstrate the vast amount of good being accomplished in the southern section of our city. Its board of trustees and its attending and consulting staff includes many of Albany's leading business men and physicians.

CONTAGIOUS DISEASE HOSPITAL.—The recent ordinance passed by the Albany Common Council, appropriating \$40,000 for a hospital for contagious diseases, to be erected near and under the supervision of the Albany Hospital, will probably be amended so as to provide that two institutions be erected, one close to the Albany Hospital for the various contagious diseases, excepting small-pox, and another building for small-pox cases on the Almshouse farm. The hospital authorities will run both



institutions and charge the city only the cost of operating them. By this arrangement there would be no cause for other patients in the hospital having any anxiety for their safety.

**ANNUAL MEETING OF THE DENTAL SOCIETY OF THE STATE OF NEW YORK.**—The annual meeting of this Association was held in Albany, May 12 and 13. Dr. M. L. RHEIN, of New York, in a very interesting paper urged the training of our nurses for dental nursing: in brief, that women graduates of a training school, after having passed a State Board examination shall be registered as "trained dental nurses," and that such nurses shall be permitted to attend to the cleansing and care of the teeth under the prescription of the patient's attending dentist. This proposition was endorsed by the Stomatological Section of the A. M. A.

**CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.**—The Sixth Triennial Session of this Congress was held in Washington, D. C., May 12, 13 and 14. The meeting began Tuesday afternoon, at which session the President, Dr. W. W. Keen delivered the address. Sixteen societies and associations of specialists were represented and most of the discoveries in medicine and surgery during the past three years were discussed.

**PURE FOOD AND DRUG LEGISLATION.**—It is a noteworthy fact that legislation in the interest of pure food and drugs is in progress, both in the United States and in Great Britain, including her colonial territory. After July 1, 1903, all food products or drugs imported into this country found to be adulterated, impure, falsely labeled or which do not comply with the laws of the country, where they were manufactured or from which they were exported will be refused admission. The imports of drugs, foods, and drinks into the United States averages about \$10,000,000 a month. A little over half of this amount is represented by drugs, the remainder being divided among wines, beer, provisions, vegetables and fish.

**FOURTH PAN-AMERICAN MEDICAL CONGRESS.**—At a meeting of the International Executive Committee of the Congress, held April 1, 1903, it was decided to accept the proposal of the Argentine Republic to hold the Fourth Pan-American Congress in Buenos Ayres in 1905, instead of 1903, as has been announced. The meeting of the American Medical Association in New Orleans, the Congress of Physicians and Surgeons at Washington and the International Medical Congress in Madrid would have prevented the attendance of a large number of representative men.

**SANATORIA FOR CONSUMPTIVES.**—The recent act introduced into the Assembly, known as the Goodsell-Bedell bill, to amend the Public Health Law, requiring the consent of township and county authorities for the establishment of any sanatorium for consumptives, which under the authority of chapter 327, Laws of 1900, might be erected by a city of the first class outside the city limits, is being protested by the New York Charity Organization. The Committee on Prevention of Tuberculosis has

urged the Governor to veto the measure as it would not only prevent cities of the first class but even individuals, societies or corporations erecting such sanatoria, because it would be impossible to convince the lay local authorities that such an institution would not be a menace to the community. As a matter of fact experience has shown that the prevalence of the disease and the death rate from it are actually lower in the neighborhood of sanatoria of this kind than in other communities.

**SILVER NITRATE INJECTIONS IN THE TREATMENT OF CONSUMPTION.**—Dr. Thomas J. Mays, of Philadelphia, has published the results of the use of silver nitrate injections for pulmonary consumption. A record of 55 cases shows arrest of progress of the disease in 11 cases, 22 cases improved, 7 cases did not improve and 15 died. There was an average gain in weight of 10 pounds. In nearly all of the cases, cough and expectoration were quickly improved, vomiting checked and night sweats markedly improved. The process used is as follows: Select for injection a point immediately over, or slightly behind, the pulsating carotid artery in the neck, between the angle of the jaw and the clavicle. Lift the skin between the thumb and forefinger of the left hand and puncture only immediately through the skin. Inject five minims of a  $2\frac{1}{2}$  per cent. solution of cocaine hydrochlorate, detach the syringe from the needle and let the latter remain in the puncture. Wash out the syringe with water, draw a  $2\frac{1}{2}$  per cent. solution of silver nitrate into the syringe, attach the latter to the needle and throw in 5 minims of same. As a rule, most of the injections should be given on the side below which the affected lung is located.

**HYPERCHLORHYDRIA, A SYMPOSIUM.**—The June issue of the "*International Medical Magazine*," will be devoted to a symposium on this subject. Among the European contributors will be, Prof. Ewald, Berlin; Prof. Hayem, Paris; Prof. Von Noorden, Frankfort; Dr. Kuttner, Berlin; Prof. Rosenheim, Berlin. There will also be contributions by the leading specialists of this country.

**PERSONAL.**—Dr. JOHN McALLISTER (A. M. C. '79), of New York City, has been appointed surgeon to the New York Central Railroad on the Hudson River Division at New York City.

—Dr. GEORGE F. GARDNER (A. M. C. '78) has removed from Pierrepont Manor to Ellisburg, N. Y.

—Dr. J. W. RACETTE (A. M. C. '93) has moved from Bennington, Vt., to 704 Albany street, Schenectady, N. Y.

—Dr. ADEN C. GATES (A. M. C. '93) has moved to No. 3 East Strand, Kingston, N. Y.

—Dr. LEROY HOLLIS (A. M. C. '93) has moved to Lacona, N. Y.

—Dr. W. C. SEBRING (A. M. C. '93) has moved to Kingston, N. Y.

—Dr. B. LIVINGSTON (A. M. C. '99) has moved to No. 133 West One Hundred and Thirteenth street, New York City.

—Dr. C. R. CONKLIN (A. M. C. '99) has moved to 168 East Sixty-second street, New York City.

—Dr. C. F. THEISEN (A. M. C. '92) has been elected a member of the American Laryngological Association, a very exclusive society of specialists.

—Dr. W. J. SWART (A. M. C. '98) of the American Presbyterian Mission in Siam has been transferred from Petchaburee to Nakown Sri Tomerat, to have charge of the erection of a new hospital for the mission.

—The following Albany physicians have changed their addresses:

—Dr. WILLIAM H. MURRAY (A. M. C. '69), to 290 Lark street.

—Dr. ALVAH TRAVER (A. M. C. '98), to 217 State street.

—Dr. ARTHUR SAUTTER (A. M. C. '94), to 220 State street.

—Dr. ARTHUR VAN LOON (A. M. C. '91), to 198 State street.

—Dr. ARTHUR ROOT (A. M. C. '90), to 218 State street.

—Dr. LEO NEUMAN (A. M. C. '92), to 194 State street.

—Dr. C. HARPER RICHARDSON (A. M. C. '97), to 217 State street.

## Current Medical Literature

### NEUROLOGY

Edited by Henry Hun, M. D.

#### *The Pathology of So-called Acute Myelitis.*

H. DOUGLAS SINGER. *Brain, Summer, 1902.*

Singer's paper is arranged in the following order: (1) a brief historical account of the views held with regard to the pathology of so-called acute myelitis; (2) a description of the spinal cord in two cases which died within eight weeks of the onset of symptoms; (3) some remarks upon the etiological and clinical features of the disease which bear upon the conception of its pathology.

Prior to 1866 softening, both in the brain and cord, was believed to be inflammatory. The two conditions were described as acute cerebritis, and acute myelitis. In the same year Dr. Bastian ascribed "softening of the brain" to the occlusion of the blood-vessels. In 1882 he explained softening of the cord by "thrombosis of spinal vessels, the result of disease of their walls." R. T. Williamson, Oppenheim, Marie, Bruns, Ziegler, and Rosin, support the thrombotic theory, and state that many cases have been reported in support of this theory. On the contrary the inflammatory theory is maintained by Gowers, Taylor, Schmaus, and Sacki.

In France, acute myelitis of the spinal cord is ascribed to the action of bacteria or their toxins. Various organisms, especially streptococci and staphylococci, have been cultivated from the softening cords in man.

Author's cases: A. B., male, aged 56, was, clinically, a typical case of Acute Myelitis. He contracted syphilis two years before the onset of the illness from which he died. In 1901 had a cyst removed from right elbow-joint. Wound healed without trouble or pus, but four days after operation he felt numbness and tingling in lower extremities and in a few hours developed a complete flaccid paraplegia, with complete anæsthesia and

urinary retention. Later he developed a spastic condition of the legs, incontinence of urine and feces, bed sores and cystitis. He died seven weeks after the onset. The spinal cord, at autopsy, showed nothing abnormal to the naked eye.

After hardening, a gross lesion was found in the cord, which was limited to the eighth, ninth, and tenth dorsal segments. In the eighth segment was a patch of softening in the anterior column of the cord, while a little lower down was a smaller patch in the dorsal column.

The most striking feature, in sections stained with hæmatoxylin and eosin, was the condition of the blood-vessels. Both internal and external coats showed extreme thickening, in places obliterating their lumen. The larger vessels showed a small celled infiltration limited to the perivascular lymph spaces and proliferation of the nuclei of the internal and external coat. The nervous tissues presented the usual appearance so often described in acute myelitis, but there was no small celled infiltration or increase of neuroglia tissue nor multiplication of its nuclei. Thus the picture was entirely distinct from acute inflammation of any tissue.

The second case was a male, aged 12 years. The patient was at the time of the onset of the paraplegia, suffering from a gummatous meningitis, the result of congenital syphilis. The paralysis of the legs developed rapidly in the course of two or three days and death occurred seven weeks after. The cord and the theca were hardened in formalin. No naked-eye changes were visible. On examination, with Marchi's method, a transverse lesion was found in the sixth dorsal segment, extending only a short distance in a vertical direction. The microscope showed lesions similar to case one. The vessel walls were thickened and small celled infiltration was limited to the perivascular sheaths. There was no evidence of leucocytal infiltration or multiplication of neuroglial tissue to indicate inflammation of the spinal cord itself.

The author, in support of the theory of thrombotic softening as the etiological factor in the production of acute myelitis gives the records of nineteen cases which occurred at the National Hospital during the past six years, together with two personal cases. In fifteen, all males, there was a definite history of syphilis, in twelve at intervals of one to three years from the onset; in three, six and a half, ten and twelve years respectively before the occurrence of the paraplegia. Of the remaining four cases, in one syphilis was denied, but could not be excluded, while no other cause was discovered; two occurred in old people, 59 and 73 years of age, with marked arterial changes. One a lad of 19, in whom venereal disease could be excluded, had had indisposition lasting two or three weeks before the onset.

These figures, with regard to syphilis, are supported by Erb and Rosin. In seventeen of the nineteen cases, there was either syphilis or senile degeneration, the two most potent factors in the causation of thrombosis of arteries. The author states that if we allow that a few cases of acute myelitis are infectious in nature, it is quite possible that thrombosis may occur as the result of the degenerative changes in the vessel walls, the result of the circulation of toxins in the blood stream. In support of the thrombotic theory, softening is the direct cause of acute myelitis. The



author compares the clinical pictures of acute myelitis and cerebral thrombosis. In both premonitory symptoms of a subjective character may exist for a longer or shorter time, followed by a rapid onset in from a few hours to a day or two. Both often occur during rest or at night when the circulation is slowest. In both there is a slow improvement up to a certain point, and, lastly, the fact that paraplegia not infrequently supervenes in a patient suffering from hemiplegia of vascular origin.

## DERMATOLOGY

Edited by F. C. Curtis, M. D.

*Concerning Prurigo Lymphatica. (Ueber Prurigo lymphatica.)*

BUSCHKE. *Deutsche medicinische Wochenschrift, November 20, 1902.*

By the term Prurigo is meant a skin disease which begins in early youth, and continues, in the majority of the cases, with remissions and exacerbations, during the life of the patient. The disease localizes itself mainly on the extensor surfaces of the extremities, and only in the severest cases does it spread to other parts of the body. The characteristic lesions, the so-called prurigo nodules, sometimes take the form of small rose-colored and sometimes solid inflammatory elevations, which most always have on the tips a small vesicle. They develop very rapidly, cause a great deal of itching, and when they disappear, which as a rule they do very quickly, leave small brownish pigmented spots, or small hard nodules which persist for a long time. As a result of the severe itching and the resulting scratching, particularly in the region of the prurigo nodules, numerous excoriations are present, which, when they heal, leave superficial cicatrices. After the disease has existed for years, the skin gradually takes on a dark brown pigmented surface, becomes very much thickened, and the neighboring lymph glands are found to be enlarged and hard. They are not particularly sensitive to pressure. In regard to the etiology of this affection nothing is known. People afflicted with the disease are most always poorly nourished and anæmic. A good many authorities believe that typical prurigo is the result of a skin disease early in life, which takes the form of a diffuse, chronic, itching urticaria, with formation of vesicles. To the above form of the disease first described by Hebra, the author adds still another, which is of interest chiefly on account of the probable relationship of the skin affection to the involvement of lymphatic organs. He describes three cases with the following points of interest: the first patient, a male, aged 58 years, had a characteristic prurigo distributed over the usual places, with itching and pigmentation, and a well-marked enlargement of the inguinal, axillary, supraclavicular, and some of the cervical glands. The glands were firm to the touch, painless, and freely movable. His spleen was much enlarged. Examinations of the blood showed that there was no increase in the lymphocytes, nor any relative increase in relation to the polynuclear leucocytes. Both the other cases had well-marked enlargement of the inguinal glands, and decided spleen tumors, with the characteristic skin lesions. Pinkus has called attention to the possible connection between certain itching skin affections

and hyperplasia of the lymphatic structures, as for example the skin eruptions, similar to prurigo, occurring during the course of a so-called pseudo-leukæmia. These prurigo-like eruptions have also been observed with lymphatic hyperplasia due to other causes, such as tuberculosis and malaria. In a case observed by Blaschko the skin affection subsided with the disappearance of the enlarged lymphatic glands, and developed again with the appearance of the glandular enlargement.

In conclusion, the author states that while the question is by no means settled, there is probably even in Hebra's prurigo, an original blood disease that is in relation to the hyperplasia of the lymphatic organs.

### BACTERIOLOGY AND HYGIENE

Edited by A. J. Lartigau, M. D.

*Experimental Researches Upon the Immunity Conferred by the Vaccine of Haffkine. (Recherches experimentales sur l'Immunité Conférée par le Vaccin de Haffkine.)*

WURTZ and BOURGES. *Archives de Médecine Expérimentale et d'Anatomie Pathologique*, Tome XIV, No. 2, 1902.

The authors state that although thousands of individuals have been treated by Haffkine with the pest serum, very little animal experimentation has been done with it. They carried out a series of experiments with vaccine prepared exactly according to Haffkine's instructions. The animals used for experimentation were mice, which received from one to four vaccinations, and were subsequently inoculated with the plague bacillus. The authors found that it was extremely difficult to treat the animals with the vaccine, which is simply an old sterilized culture, without killing a great many of the animals. In the animals which survived, however, they found that a distinct though slight protective influence had been conferred by the vaccination. The mortality of vaccinated mice was 72 per cent., while that of the unvaccinated was 94 per cent. Those which had received three or four inoculations with the vaccine survived in a much larger proportion than those who had only received one. The immunity was conferred very quickly after the vaccination, and lasted for a considerable length of time. Some of the animals were not inoculated with the plague bacillus until some months after the vaccination, and yet were well protected.

### LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY

Edited by C. F. Theisen, M. D.

*Concerning the Pathology and Treatment of Otitis Externa. (Ueber die Pathologie und Therapie der Otitis Externa.)*

REISSMANN. *Wiener medicinische Wochenschrift*, No. 3, 1902.

By the term otitis externa is meant an inflammatory process involving the cutis of the external auditory canal. The inflammation does not always confine itself to the external canal but may extend to the

tympanic membrane, because the outer layer of the drumhead is a continuation of the cutis lining of the external canal. An external otitis may cause impairment of hearing when the tympanic membrane is perfectly intact, as for example when the swelling in the external canal becomes very great. A furuncle of considerable size in the external canal, would affect the hearing just as much as a polypus or cerumen.

*Etiology.*—A circumscribed external otitis is caused by a general furunculosis, (Löwenberg was the first to find the staphylococcus albus and aureus, the staphylococcus citreus, and the bacillus pyocyaneus in the pus), by mechanical irritation of the cutis as from the scratch of a finger nail, by the use of irritating substances such as camphor, chloroform, carboglycerin, etc. A diffuse external otitis is due to a variety of causes, in part it may be idiopathic, perhaps due to pathogenic micro-organisms, to the penetration of the organisms of other sorts, such as the aspergillus niger, flavus, or glaucus. A common cause for external otitis is badly treated cases of otorrhœa, in which the external canal is irritated and infected by the purulent discharge. An external follicular otitis is the type of the acute circumscribed inflammatory process. Severe throbbing pain is present, the external ear is sensitive to pressure, and the canal is very much swollen. In the majority of the cases this is due to a furuncle, and the symptoms rapidly subside after this is incised. For disinfecting purposes a one or two per cent. lysol solution is the best. In cases in which the inflammatory process extends to the deeper tissues, the best treatment is a free incision down to the periosteum, and the use of a spoon curette. After the operation, a tampon of dermatol gauze should be inserted in the external canal. In many cases there are recurring attacks of this sort, which results in a dryness of the external canal. Instead of the normal secretion there is a formation of crusts, for which the author recommends an ointment of zinc oxide, talcum and vaseline, or Hebra's diachylon ointment.

Diffuse external otitis begins with almost the same symptoms as the circumscribed inflammatory process. There is a fairly uniform infiltration of the external canal, with redness of the epidermis, which has a scaly appearance. The external canal is at times so full of cast off scales that the tympanic membrane cannot be seen. There are a decided loss of hearing and considerable tinnitus. A complication of this form of otitis is an extension of the inflammatory process to the periauricular tissue, causing the peirauricular phlegmon. In a case of this sort reported by the author, the swelling extended anteriorly to the superior maxillary bone, and above to the linea temporalis. The integument of the mastoid process was œdematous, the ear standing away from the head. Repeated incisions failed to reveal the presence of pus.

After about four weeks, fluctuation developed along the anterior border of the mastoid, and a subperiosteal abscess was emptied by an incision. In the cases of otitis externa parasitica, applications of alcohol are of the most service.

# ALBANY MEDICAL ANNALS

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## Original Communications

### PRESIDENT'S ADDRESS

*Delivered at the Annual Meeting of the American Medico-Psychological Association, held at Washington, D. C., May 12, 13, 14 and 15, 1903.*

By G. ALDER BLUMER, M. D.,

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For a whole year such a thing as serenity of soul is unknown to the man who awakes to find greatness accidentally thrust upon him as the president-elect of an association like this. From that moment of initial apprehension to this one of supreme anxiety, the thought of delivering the annual address haunts him during every waking hour and even racks his subconscious mind while he seems to sleep o' nights. If for an instant he forget his humility and, imagining a vain thing, think himself qualified to launch authoritative utterances *in vacuo*, forthwith he recalls the ruthless saying of a British historian, "Before you attempt to write on any subject, be quite certain that you can say something fresh about it," whereat, with quickened olfactory sense, he sniffs the air of staleness that clings to his thoughts and their clothing.

He makes his heart a prey to black Despair,  
He eats not, drinks not, sleeps not, has no use  
Of anything but thought; or, if he talks,  
'Tis to himself.

And if there be solace of a sort in the voice of Ecclesiastes, warning us not unkindly against the needless elaboration of our own ignorance, "God is in heaven, and thou upon earth; there-



fore let thy words be few," there is none whatever for the present writer in the caution given twenty-three years ago in this city by a witty Secretary of State to a United States consul, about to assume the duties of his office in Scotland. Bret Harte had insisted upon receiving his parting instructions, in audience with Mr. Evarts himself, whereupon, the grand old man, wheeling about in his chair and casting one lank leg over the other, addressed the man of letters in these solemn, admonitory words: "Mr. Harte, you are going to Glasgow with laurels upon your brow; have a care that you do not browse upon your laurels." In truth, gentlemen of the Association, the very bay leaves and berries with which you have seen fit to bedeck an unworthy president in this instance must for the nonce be his food, and, alas, baccalaureate "ambition should be made of sterner stuff."

With this prefatory confession, to which I add an acknowledgment most profound of the honor which this Association has conferred upon me, I shall proceed to make some discursive remarks upon a few subjects of general interest to our specialty, even as "the wind bloweth where it listeth."

#### THE OUTLOOK FOR PSYCHIATRY.

And what better beginning than briefly to refer to the happy event in our history which brings us together in this city at this time? We are met in affiliation with and as a constituent member of the American Congress of Physicians and Surgeons, such union having been effected since our last meeting at Montreal when Providence was selected as our place of annual assembly, subject to this change in the event of that fact. We are sensible of the privilege which we thus enjoy and have a fresh incentive to achievement in the stimulating fellowship. If there still be detractors here and there who allege that psychiatry is a laggard in the race of the specialties, the account which we may be permitted to give of our stewardship every three years will either furnish proof of their contention or of our own claim to sit in this Congress, not by sufferance, not by virtue of seniority as the oldest national medical society on this Continent, but solely by reason of good work well done. We may well rejoice then that we have this opportunity to come out into the open and show our colors. Shall we be held responsible, in fairness, if it be complained that the actual state of our knowledge of brain disease is not on a par with that of other departments of human path-

ology? The complaint may perchance serve the useful purpose of a goad and so teach us to think less of the little that we know than of the much we know not, but it ignores the fact that the advance of knowledge must necessarily be from the simpler to the complex. In the whole medical hierarchy there is no specialty fraught with greater perplexities, insomuch that it was natural and logical that, while we may ourselves claim to have approached and met its stupendous problems with no faint heart and with a reasonable measure of success, recognition should have come to us tardily under the slow but sure compulsion of achievement, while other branches of medicine, driving the ploughshare over easier and narrower fields of research—I say it not in disparagement—have seemed to advance by leaps and bounds and to permit their votaries to hold high the head in “pride, rank pride, and haughtiness of soul.”

“In the long run,” said Professor Clifford Allbutt, not long ago, “to construct a true method is a greater service to mankind than to discover items of knowledge,” thus furnishing the keynote to the Boyle Lecture on the “Rise of the Experimental Method in Oxford,” commenting upon which a sympathetic critic,<sup>1</sup> in felicitous epigram, remarks that “a finger post for future guidance is a more lasting memorial than a mausoleum of misdirected energy.” During the past few years, and more especially during the year last past, we have had much occasion for gratitude in the provision of many such finger posts. The impotence of effete methods has been emphasized, and under the influence of such schools as the McLean, Worcester, Sheppard and Enoch Pratt Hospitals and the Pathological Institute of New York, to mention only a few, we have learned the lesson that the scientific study of psychiatry consists primarily in the study of the mental phenomena, not physical conditions, and that the study of the latter loses a large part of its value unless the mental phenomena have been well studied, and of itself can never give us an understanding of insanity. Those of you who were present at the annual meeting at Montreal last year may remember that this was the envoi of Dr. E. Stanley Abbott’s impressive paper on the “Criteria of Insanity and Problems of Psychiatry.”<sup>2</sup> And the practical point is this, namely, that “by modern scientific methods, scientific work in the field which is peculiarly the domain of psychiatry can be done in hospitals not equipped with laboratories. The work so done will have the same value for subsequent lab-

oratory work that the accurate and detailed symptomatology in general medicine had for modern pathological anatomy."<sup>3</sup>

There are two distinct schools of psychiatry to-day. In the one are the men who say that we can group our patients clinically, this is, by their behavior, while in the other are those who declare that we can only group them as we ascertain the lesions of the nervous system which give rise to the morbid conduct. On the one hand are the disciples of the microscope, on the other those of the ward and bedside. Psychiatry may be said to be "up against" the same problem that faced chemistry years ago, namely, the necessity of formulating a working theory. To-day we know nothing of the manner in which the atoms and molecules behave and yet so nicely have the chemicals been grouped according to their action and re-action that we can predict with accuracy the nature of the resulting compound to be formed by the union of two substances, neither of which we know except in theory. In other words, we can make a prognosis in chemistry. And what was done for chemistry years ago, Kraepelin is doing for psychiatry to-day. More than any other man of recent times the great teacher of Heidelberg has brought us nearer to the place where we may safely predict the issue in a given case of mental disease. He has taught us how to study our cases with greatest profit alike to the patients and ourselves. Perhaps we were already studying each individual case carefully, but we were not comparing case with case. We had already noted that A was depressed and that B was depressed, and had perhaps grouped them roughly as depressed forms; but we had failed to wonder why A always shrank from the touch of our hands while B remained indifferent. And so with the thousand little details which we had been wont to regard as of trifling import, we were led to be more careful. And after we had compared these data we were taught to take the whole clinical complex and compare it with this and with that other one until the least common denominator had been found. Let us not complain if in the majority of instances that l. c. d. spells *dementia praecox*. "To be sure," says Professor Bleuler, of Zürich,<sup>4</sup> "the name is not well chosen; but the question is only that of a *nomen at flatus vocis* and not of the thing." Even if "by naming a disease you erect an idol with special qualities which you set yourself at once to destroy," as Savage once said,<sup>5</sup> that wise man was quick to admit that "for the convenience of discussing groups of



symptoms we have to label them." Best of all, Kraepelin has instilled into our minds more of the scientific spirit. His own spirit is one of beautiful tolerance and his system, in keeping with it, one of perfect adjustability. Frequently he is heard to say, "These things seem to be so, but more careful observation is needed to confirm them." The future will doubtless bring many changes in the Kraepelin classification—and none so likely to make them as Kraepelin himself—but, though its form may change beyond recognition, the system of which the classification is but the product is bedded on rock and will endure.

While for several years the New York State Hospital service, in the evolution of its centripetal system, has been made to feel "the whips and scorns of time," and under fardels unbearable "to grunt and sweat under a weary life," a saviour has appeared in the purely medical field and set himself the praiseworthy task of making "good the final goal of ill," by showing the medical officers how to make a system of centralization useful in the development of the medical spirit in the State institutions. Dr. Ira Van Gieson, eminent in his peculiar sphere and working under difficulties that all must recognize, paved the way for his successor in the Pathological Institute. In a paper,<sup>6</sup> which every member of this Association should read and ponder, Dr. Adolf Meyer, the new Director, outlines the aims and plans of the Pathological Institute for the New York State Hospitals in a spirit of such optimism that even he who catches ever so little of it becomes at once a man of confident to-morrows. At a meeting of this Association eight years ago, as some of us remember, Dr. Meyer expressed the hope that the day might soon come when a special pathologist in the old sense would no longer be needed. "I was then," he now says, "and still am, convinced that the progress of medical work depends not on the mere introduction of a man with skill for microscopical work, but on the promotion of a spirit of accuracy in whatever work is done, and in whatever is written or said about the patients. The various hospitals should be able to encourage their assistants to conduct *all* the practical medical work according to acknowledged medical standards. Every assistant should thus acquire the habit of planning accurate statements of facts, statements of the indications for action and opinions, and also the nature of the disease, its probable course and the possibility of introducing therapeutic measures; and in the case of autopsy, the methods of get-



ting at the facts and of formulating indications for more minute investigations. In addition to this, the physicians ought to be encouraged to record data which might be of advantage for collateral scientific progress, even if they cannot be directly utilized in the special case or for the specific medical indications just mentioned. But this work for science' sake is a secondary matter which, however, will come naturally." This sturdy champion of scientific honesty insists further that "we cannot lay too much stress on the necessity of planning work according to what is actually mature and wanted, instead of according to what perhaps may be done."

So many worlds, so much to do,  
So little done, such things to be.

No wonder that under such a leader the brethren of New York are encouraged to labor, sometimes against heavy odds, in the hope that a better day may dawn for them in the administrative sphere of their work. No wonder they have eagerly seized the opportunity furnished, at the instance of the President of the New York Commission in Lunacy, Dr. Frederick Peterson, to receive instruction under Dr. Meyer at the Central Institute, with the result that over sixty men of the service have gone back to their hospitals with lighter hearts and freshened zeal. And this notwithstanding the apparent subordination in New York State of the scientific aspect of the work to the business side as shown by the statistics of the handbook of the State hospitals. For last year, while there were one hundred and twenty-three physicians in the fourteen New York State hospitals, five years previously, when there were three thousand fewer patients, there were one hundred and twenty-five physicians. Of like significance, too, are the figures relating to salaries. The legislature of 1901 made an appropriation for salaries of officers amounting to \$265,000; in 1902 the appropriation was \$255,000; and this year the proposed appropriation is \$230,000, or at an annual rate of about \$9.50 per capita for the estimated number of patients for the next fiscal year.<sup>7</sup>

#### CENTRALIZATION IN NEW YORK.

Thus we are brought naturally to a consideration of the New York situation in its political aspects. My apology, if apology be

needed, for special animadversion upon the policy of the Empire State must be the fact that the prediction, "As goes New York so goes the Union," has its frequent application in the administration of the charities of other States. And I have it very much at heart to warn other States against such disaster so far as the insane are concerned. It may be assumed for the present purpose that most members of this body are familiar with the main features of State care in New York, and that they are aware that the Commission in Lunacy, instead of being merely an advisory board, is clothed with executive powers of an extraordinary character insomuch that practically all authority emanates from the Capitol at Albany. The system is one that checks ambition, subordinates the individual superintendent to the crippling spirit of bureaucracy and collectivism, and is in all respects inimical to the full and free growth not only of the medical officers themselves, but of the hospitals over which they have been called to minister. Greed of power and arrogance of office had apparently reached their limit before the winter of 1902. One thought: "Hitherto shalt thou come, but no further; and here shall thy proud waves be stayed." But the message of Governor Odell to the Legislature showed very clearly that the end was not yet. Theretofore each institution had had its board of managers, charged with the general management, direction and control of the hospitals, subject to the greater powers of the State Commission in Lunacy and, subject to the Civil Service laws, the managers also had the power of appointing the superintendent. Under a specious charge of extravagance, which at once became ridiculous when it was remembered that the managers were without financial authority whatsoever and that all proposed expenditures had been subject to review by the Commission, the Governor recommended that the boards be abolished and that their executive powers be vested in the State Commission in Lunacy. Bills embodying the Governor's recommendation were at once introduced, and, after some twenty amendments had been made, not one of which affected the principles involved, in due course became law. Whereas, in its report for 1889, the Commission had said: "The Superintendent, or chief medical officer of every asylum should be clothed with the absolute power of appointment and removal of all officers subordinate to himself. It is doubtful if the best results can be obtained under any other system," that doubt was apparently removed from the Commission's mind

thirteen years later, when it not only acquired that power itself, but was given, subject to the approval of the Governor, still further powers, namely, "to transfer superintendents and assistant physicians from one State hospital to another, to abolish the office of any of the resident officers or employes, and to transfer any of the powers and duties of the superintendent to another officer to be appointed by the Commission, to prescribe the form of, and the subjects to be embraced in, the superintendents' annual reports" (save the mark!). The approval of the Commission was required before the superintendent could remove any resident officer. The sole power to appoint and remove the steward, which had formerly been vested in the superintendent, was given to the Commission. The Commission might summon any officers of the State hospitals to meet it at its office or elsewhere.<sup>8</sup>

No one who has had experience in what the world calls practical politics can doubt that the tendency of self-seeking men will be to look for reward for service rendered in the procurement of office in this powerful oligarchy controlling the bodies and souls of thousands of their fellow citizens and the disbursement of millions of money. For if the superintendent and assistant physicians may be moved about like pawns on a chess-board at the behest of the Commission, and the former may have any of his powers and duties transferred, under like mandate, to another officer to be appointed by the Commission subject to the approval of the Governor; if the tawny lion himself is thus seen "pawing to get free his hinder parts," what shall be said of the thralldom of the smaller fry of such a shackled service? It is true, and happily true, that the President of the Lunacy Commission is a man eminent in character and attainments, and far be it from me to impugn the motives of the present Executive, but let us not forget that "a system of government must be judged, not by the probable action of any present official, but by the possible action of any future official."<sup>9</sup>

Pardon me, gentlemen, if I seem to go into too great detail in exposing the degradation of a once proud service. We may well exclaim in sadness, "How are the mighty fallen in the midst of the battle!" In the passage of this crushing legislation one cannot but be impressed with the seeming impotence of public opinion against political organization at Albany. Prominent citizens flocked to the Capitol to protest against the infamous bills, among

them the Hon. Wm. Church Osborn, ex-Commissioner in Lunacy; the New York and the provincial press hurled their anathemas; mass meetings were held; the State Charities Aid Association led a forlorn hope most valiantly in its attempt "to pluck up drowned honor by the locks;" not a man appeared to champion the new legislation and no written arguments were presented in its behalf. Words of truth and soberness are but wasted breath when the man to whom they are spoken is "wiser in his own conceit than seven men that can render a reason." And in this context, I pause a moment to applaud the work of the State Charities Aid Association, a noble band of men and women without whose initiative and influence the State Care Act would not have been passed, on behalf of the medical officers of the State hospitals. It has insisted for years that the salvation of the service lies in the retention in it of men of character. In the report from which I have already quoted, it says truly: "The character of the medical superintendent is the vital element upon which the efficient administration of a State hospital must depend, and the criterion of the success of any system must be based on whether it attracts and holds the best class of medical men as superintendents." After all, it is not so much what a man does as what he is that gives him distinction everywhere; and when a medical superintendent is denied the opportunity of showing what he is, is compelled to suppress every instinct of self-sovereignty before such despotism as that of which we are speaking; if he have character, his soul will rebel against his oppressors, for "Rebellion to tyrants is obedience to God," and he will be sustained in his struggle to the bitter end till once more the New York service shall have been made fit for the gentlemen who compose it. So let him fight the good fight as

One who never turned his back but marched breast forward,  
Never doubted clouds would break,  
Never dreamed, though right were worsted, wrong would triumph,  
Held we fall to rise, are baffled to fight better,  
Sleep to wake.

#### THE INCREASE OF INSANITY.

No annual address can safely omit reference to that subject of perennial interest, to alienist and layman alike, the increase of insanity. And as no question is put with greater frequency to



members of this Association by intelligent laymen than, "Is insanity on the increase?" it is well for us to have a few data in mind to answer him. That industrious statistician and eminent publicist, Mr. F. B. Sanborn, has kindly given me for my use some figures prepared for his report to the National Conference of Charities and Correction, which is just concluding its annual session at Atlanta. His report refers to New England only, though it is not without application to other parts of our country. A study of Mr. Sanborn's figures no longer leaves it doubtful that the insane are increasing in New England beyond the natural increase of the population, however much disagreement there may be as to the relative increase in different States. While everywhere the number of insane increases, so does the total population, with the possible exception of Vermont and Maine. These two States lose by migration to other communities about as many as they receive from outside, and the gain by births is small. Yet the example of Ireland, as Mr. Sanborn points out, gives proof that the insane may increase while the population diminishes, and this would seem to be true of Maine and Vermont. Census enumeration, whether of federal or State direction, is notoriously untrustworthy in this matter of the insane, otherwise the proof might be established beyond peradventure. Witness the inconsistency in the enumerations at different dates. In Maine the federal census of 1880 gave 1542 insane in a population of 648,936; but ten years earlier it gave only 792 among 625,000, and ten years later it gave only 1,299 among 661,000. Mr. Sanborn takes the very moderate estimate of 1,400 at present, in a population of 661,000, although his own judgment is that the true number exceeds 1,600. There were under asylum treatment in 1901, when the new institution at Bangor was opened, 785 at the old Augusta hospital; at present, after an interval of nineteen months, there are 865 in the two asylums. Thus we have a gain of asylum cases of about 100 in two years, or at the rate of 50, or more than six per cent. a year; and, though the actual gain in the whole State must have been less—the opening of a new asylum always increasing the new commitments beyond the average, it is evident to Mr. Sanborn—and his conclusion seems conservative—that allowance must be made in Maine for a gain of at least two per cent. a year. Yet Maine's total population has not shown a gain of twelve per cent. in thirty years. The returns from the Massachusetts Board of Insanity show (April 1,

1903) 9,644 insane persons where six years ago there were less than 7,250, a gain of about 400 a year, or more than five per cent. Dr. Copp writes: "On October 1, 1897, there were in Massachusetts in public institutions, or boarded out, in almshouses and private families, 7,285 patients; on October 1, 1902, there were 9,121, percentage of increase for five years, 25.2, annually five per cent. I exclude private patients because so many of their patients are non-residents of Massachusetts." Not to go into tedious detail with reference to the other States of New England, we may sum up thus the estimates made by the reporter to the Conference:

Maine .....	1,400, perhaps.....	1,600
New Hampshire..	900, perhaps.....	1,200
Vermont .....	1,200, perhaps.....	1,200
Massachusetts ...	11,000, perhaps.....	11,000
Rhode Island.....	1,150, perhaps.....	1,200
Connecticut .....	3,250, perhaps.....	3,300

In all New England 18,900, perhaps 19,500 in a population of about 5,800,000. Thus we have one insane person to 307 inhabitants.

#### THE PREVENTION OF INSANITY.

Whether or not insanity be on the increase, the fact that in New England and New York the ratio of insane to the general population is approximately as one to three hundred, is sufficiently impressive to bid us ask ourselves the question whether we are doing all in our power to prevent its occurrence. Personally I have no hesitation in answering that question in the negative. Never has there been a time, it is true, when the mental invalid has been better housed and more intelligently treated, and with our new departments for the insane in general hospitals and our so-called psychopathic hospitals which are to be, the future is big with promise. But, gentlemen, you will agree with me that preventive medicine is the highest development of medical science, and that the best way to diminish insanity is by its non-production. We all have opportunities to teach those simple lessons in social hygiene which are brought home to us more than to any other specialists in medicine, in the solemn doctrine, "The fathers have eaten sour grapes, and the children's

teeth are set on edge;" but do we not, lest we hurt somebody's feelings, constantly shirk our responsibilities as mental physicians when we stand silently by as witnesses of the union of two stocks that is bound to be the parent of nervous and mental disease in the offspring? For one ambitious mother who schemes to marry off her daughters, regardless of consequences, I believe there are ninety-nine (such is my faith in womanhood) who would listen to and not resent, even if they did not often act upon, a hint in hygiene from the family physician. To us alienists it is so reasonable to protest that no person of direct insane inheritance shall marry another of like taint that we wonder why the criminality of such unions does not occur to the men and women, often of apparently average moral sense in other directions, who contract or countenance them. There is an appalling amount of ignorance on this subject—ignorance that has its roots Heaven knows where. Even people who pass in the community for reasonable beings often imagine that there is initiated some mystic process, psychic or physical, that makes for sanity when marriage of whatsoever sort is consummated. Few of us have not been asked whether a neurotic or psychopathic patient would not be "all right" if he or she married; and in cases where insanity develops soon after marriage and before pregnancy, it is a common enough delusion that child-bearing will cure the psychosis. It is encouraging to notice, however, that the principle that prevention is the chief end of all medicine is gaining ground among the laity and that the lay press has taken to educating the public on this very subject of insanity and marriage. In a recent article in the *Westminster Review*,<sup>10</sup> Dr. A. W. Wilcox shows, by clinical and statistical evidence, that heredity and drink are the two overwhelmingly important causes of insanity and advocates as preventive measures "the prohibition of the marriage of persons with a distinct family history of insanity or alcoholism, the permanent detention of persons after a third admission to an asylum and the granting of divorce from the unfortunate victims of incurable insanity or continued drunkenness." Harsh as such measures may seem to some and shocking as they may be to the religious sentiment of others, it is well for all of us to reflect that the making of human life is as serious a matter as the taking one. Men and women do not realize how much insanity is multiplied in the land by natural increase by birth. Nay more, the fact was brought out in a report<sup>11</sup> by Dr. A. W. Wilmarth, Superintendent



of the Wisconsin Home for the Feeble-Minded, presented last year at the National Conference of Charities, that the tendency in degenerate families is to rear a larger number of children than those of average intelligence. "Large families are found among all grades of society, but investigation seems to indicate that the higher the mental training of the parents, the less numerous the family, as a rule." And Kiernan<sup>12</sup> has shown that the average number of children in ninety degenerate families, which he had observed, was eleven; while multiple births occurred more than ten times as frequently as in the population taken as a whole. The largest family coming to Dr. Wilmarth's own personal knowledge was eighteen. Thus it appears that while nature tends to check increase in the case of gross bodily infirmity, it is otherwise where only the higher faculties are involved in the degenerative process. And in these days when presidents of republics and of universities, and emperors are exhorting to marriage and singing paeans to frequentative maternity, it is well that they ponder these things. Moreover, men and women of feeble intelligence are notoriously addicted to matrimony and by no means satisfied with one brood of defectives. Not long ago an elderly man of melancholy mien came to consult me about his wife whose insane conduct had made life a burden from the ill-fated day of their marriage a year previously. The history bespoke a chronic psychosis of many years' duration. "But this woman is not your first wife?" I queried tentatively, for the tell-tale dye of his moustache suggested the successful widower. "No, sir," came the reply lugubriously, "she is my fourth wife and I am her fifth husband." When such things are so, and when, to quote Solomon, whose exceptional experience constitutes a claim to cathedral utterance in this context, "Wisdom crieth without; she uttereth her voice in the street," is it not high time, gentlemen, that our legislatures should enact laws looking to the effective prohibition of the marriage of the unfit? Suggestions of this kind have been pooh-poohed as without the pale of practical politics, but it is evident that nothing short of legal prevention will accomplish the end we have in view. A Connecticut statute of recent enactment forbids, under severe penalties, marriage between known defectives and, further, prohibits the normal individual from contracting marriage or living as husband and wife with any such person. In North Dakota the Creel Bill of 1899 passed one branch of the Legislature. It provided that be-



fore a couple could marry they must obtain a license which should be granted to such only as should be able to produce a certificate from a medical board to the effect that they were free from infectious venereal disease, tuberculosis, epilepsy, hereditary insanity and confirmed inebriety. Similar legislation has been attempted in other States, as well as in European countries, but the practical politician is prone to look upon all such measures as the academic suggestion of the reformer and so to kill them. Speaking of such proposed legislation for the feeble-minded, Dr. M. W. Barr,<sup>13</sup> of Elwyn, Pa., says: "After all, there is a good deal of sentimentality and false modesty in the repudiation of the idea of laws controlling increase. We simply seek for the helpless, ignorant, irresponsible, what the wealthy and the indolent do for themselves." But even if bills to this intent fail of passage because public opinion is not yet ripe for them, they at least serve the useful purpose, when introduced, of calling attention to the evils with which it is their purpose to deal. It is amazing how far behind the scientific enlightenment of the age public opinion is in this obvious exigency. Four centuries ago Sir Thomas More filed his protest against the reckless practice of his generation in his *Utopia*: "Furthermore, in chuesing wyfes and husbandes, they observe earnestly and stratelye a custome which seemed to us very fonde and folyshe." And thereupon he described what was done by "a sad and an honest matrone," and likewise by "a sage and discrete man," for the benefit of the parties of the first and second parts, adding that "they, on the other part do greatlye wonder at follye of all other nations, whyshe, in buying a colte, whereas a lytle money is in hazard, be so charye and circumspecte, that though he be almost bare, yet they wyll not bye hym oneles the saddel and all the harneiss be taken of, leaste under those coverynges be hydde some galle or soore. And yet in chuesinge a wyfe, whyche shalbe either pleasure or displeasure to them all their lyfe after, they be so recheles," and so forth. And he concludes: "If such deformitie happen by any chance after the marriage is consummate and finyshed, wel, there is no remedie but patience. Every man must take his fortune wel a worthe. But it were wel done that a law were made wherebye all such deceytes myghte be eschewed, and advoyed before hande." It's a far cry from Sir Thomas More to the twentieth century author of "Letters from a Selfmade Merchant to his Son," but we find that identical sentiment embodied

in a delicious *obiter dictum* in which the Chesterfield of the stock yard points out the perils that beset the son of to-day who goes a-wooing. "Marriages may be made in heaven, but most engagements are made in the back parlor with the gas so low that a fellow doesn't really get a square look at what he's taking." There, gentlemen, is the whole philosophy of the subject in a nutshell. And the deplorable thing about it all being that young people sometimes prefer in this matter to be among "them that sit in darkness," it behooves us as alienists, in a figurative as well as an actual sense, to maintain a controlling interest in the switch that makes for brilliant illumination. *Fiat lux!* The myth that marriages are made in Heaven has brought infinite disaster in its mendacious wake ever since the lie was first uttered. Marriages, although some of them may have the Divine sanction, are of the earth, earthy; and it is nothing less than sacrilege for erring man to hold Almighty God answerable for their blind folly while they run to cover under a make-believe aegis of Heaven.

#### MARRIAGES OF CONSANGUINITY.

A long chapter might be written on marriages of consanguinity, but this one shall be brief. Whether or not those with first cousins, both parties being healthy, and exhibiting, each in relation to the other, the complement of contrasting affinity, might be permitted, is a debatable question. But such cases are rare enough to be a negligible quantity in practice and do not affect the rule which German folk-lore has set to rhyme for the safe guidance of those who, being near of kin, might otherwise contract a closer relationship:

Heirathen ins Blut  
Thut selten Gut:  
Sterben, verderben,  
Oder keine Erben.

Pathetic enough is a letter which comes to me while I am writing this paragraph. The lady rejoices that the outlook for mentally-stricken humanity is happily more hopeful in this age than ever before, and especially that hospitals for the insane no longer inspire in intelligent people a feeling of dread. "It is well I feel in this way," she writes, "since, with most of my immediate forbears, cousins and a family tendency to mental disturbance,

which in my father's case took the form of softening of the brain and in my mother chronic meningitis, the outlook for myself is not over bright. Being without near kin I am forced to give some thought of these things, and to make provision for whatever the future may bring, so it is comforting to know that they are not universally regarded with horror." When such apprehension of mental breakdown shadows the life of an intelligent woman like my correspondent—and there are thousands of similar cases everywhere in our land—it is the veriest balderdash to prate about man's rightful intolerance of restriction in this matter of marriage. Short-sighted men and women whose ideas of Christianity are so narrow as to restrict their interest in life to the salvation of the soul; are apt to forget not only what they owe to the body but also their obligations to posterity. "It is as much a duty to transmit to the rising generation vigorous minds and bodies as to hand down to them a firmly constituted society and government. It is in his own case that man ventures to neglect the knowledge he has acquired of the beneficial effects of careful breeding."<sup>14</sup> And the blame lies at his own door when intensification of a morbid strain, whether by consanguinity or otherwise, is the price of his selfish unwisdom.<sup>15</sup>

#### THE EXCLUSION OF DEFECTIVE IMMIGRANTS.

In line with the policy of prevention which is here advocated is that of keeping out insane and other defective immigrants by stringent federal statutes. Great credit is due the Commission in Lunacy of New York for its wide-awake and intelligent activity in such exclusion. Proceeding under authority of the Laws of 1900,<sup>16</sup> which permitted the use of every endeavor "to secure legislation from Congress to provide more effectually for the removal of alien and non-resident insane," and the expenditure of "a reasonable sum therefor from the monies appropriated for the use of the hospitals," the Commission sent to Washington as its special representative, Mr. Goodwin Brown, ex-Commissioner. As *amicus curiae* it has been that gentleman's privilege to render our entire country a high order of public service by giving effective testimony at repeated hearings before the Industrial Commission of Congress. Under the act passed March 3, 1903, Congress authorizes the exclusion of an immigrant who has been insane at any time within five years of the date of his arrival in

the United States; and persons who have been twice under restraint for insanity and all epileptics and idiots are also excluded. Moreover, the time for deportation is by the act extended from one to three years from the date of arrival, and the Secretary of the Treasury is made the sole judge of the question of causes arising before or after the immigrant's landing. While this Immigration Act affects the welfare of every State in the Union, its especial importance with respect to the State of New York is obvious, for while her foreign-born population is only twenty-five per cent. of the whole, fifty per cent. of the inmates of State hospitals are of foreign birth.

In the foregoing remarks the attempt has been made "to see the individual in connection and coöperation with the whole." If in some particulars I have seemed to suggest the Utopia of Sir Thomas More, at least we may derive comfort and inspiration, in pondering the tendency of modern morals four centuries after, from the cheery prediction of Lecky<sup>17</sup> that "enthusiasm and self-sacrifice for some object which has no real bearing on the welfare of man will become rarer and will be less respected, and the condemnation that is passed on acts that are recognized as wrong will be much more proportioned than at present to the injury they inflict."

1. *British Medical Journal*, January 17, 1903.
2. *American Journal of Insanity*, July, 1902.
3. *Ibid.*
4. BLEULER, DR. E. Dementia Præcox. *The Journal of Mental Pathology*, Vol. iii, Nos. 4, 5, 1902-1903.
5. President's Address. *Journal of Mental Science*, October, 1886.
6. MEYER, DR. ADOLF. Aims and Plans of the Pathological Institute for the New York State Hospitals. Printed at the Manhattan State Hospital, East, Ward's Island, New York City, December, 1902.
7. *Charities*. April 11, 1903.
8. Tenth Annual Report of the State Charities Aid Association to the State Commission in Lunacy, November, 1, 1902.
9. *Ibid.*
10. WILCOX, A. W. Insanity and Marriage. *Westminster Review*, August, 1902. *Journal of Mental Science*, April, 1903.
11. Proceedings of the National Conference of Charities and Corrections, Boston, 1902.
12. *Ibid.* Quoted by Dr. A. W. Wilmarth.
13. *Ibid.*
14. DARWIN, GEORGE. *Contemporary Review*, August, 1873.
15. See "Marriages of Consanguinity" (Editorial) *British Medical Journal*, April 18, 1903.
16. Chapter 380, section 6, Laws of New York, 1900.
17. "The Map of Life," p. 61.



## IMPROVEMENTS IN EXTENSION APPARATUS

*Read before the Medical Society of the County of Albany, February 18, 1903.*

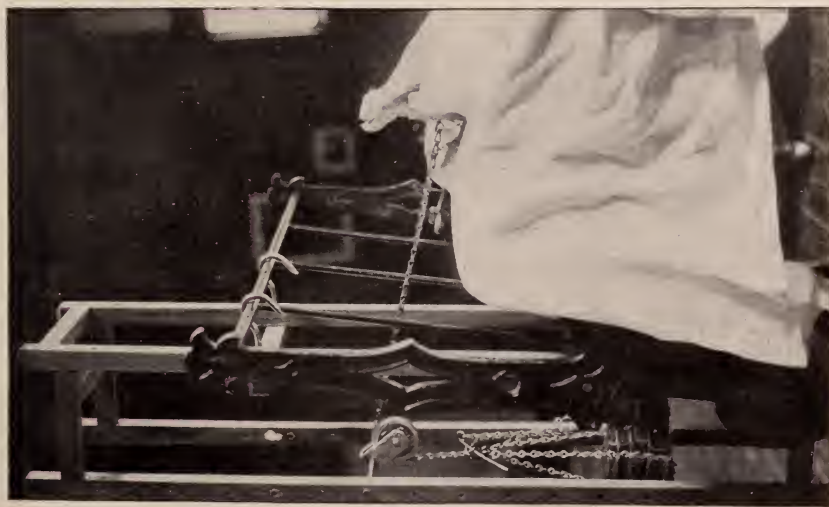
By GEORGE E. GORHAM, M. D.

In applying extension to the lower extremities for the treatment of fractures on diseased joints while the patient is recumbent, extension appliances consisting of a foot piece, a pulley, traction cord, and weights, together with some means or device for securing the pulley to the bedstead at the desired point, are always required.

To meet these requirements in private practice the surgeon often is obliged to extemporize as best he can. A piece of a shingle or cigar box being used for the foot piece, while an old clothes line, bricks, flatirons or bags of sand with any pulley to be found, complete the outfit. There are on the market and may often be found in hospitals, Buck's extension, Levi's apparatus and Sayer's extension appliances. There are many objections to each of these. One grave objection common to them all is the difficulty found in securing the pulley at the desired point. Clamps and set screws are not easily made to hold to a round iron bed frame and when they are, unsightly marring of the enamel or brass is unavoidable. To overcome these defects I have devised this simple and inexpensive apparatus which has answered my purpose so well and given such good satisfaction in the Child's Hospital, where it has been used for some months, that I am of the opinion that the general surgeon and the orthopedic surgeon in particular will find the appliance of practical utility and much more convenient than any extension appliance yet devised. I am therefore glad to present it to you for your inspection and criticism. Its construction is simple. Of oak an inch square there are four uprights, each thirty-five inches long, mortised together with cross pieces six inches long to form a frame or rack not unlike an umbrella rack. Beginning at the top on one side of the rack, holes are bored in two uprights every seven inches to allow a large screw hook to be screwed in. By means of these hooks the frame may be hung to the foot of a bedstead by simply hanging it on the foot rail.

In the two opposite posts of the rack, which are the two outer posts when the rack is hung on the bedstead, are holes at

To Illustrate Dr. Gorham's Article on "Improvements in Extension Apparatus."  
*Albany Medical Annals, July, 1903*





right angles to the former holes. Through these holes an eight inch bolt is passed which carries the pulley. This bolt may be raised or lowered a distance of thirty-five inches or the whole length of the rack and the rack itself may be raised or lowered some two feet by simply changing the hooks; thus we have a range of five feet perpendicularly for securing a pulley and laterally the whole width of the bed, secured by simply hanging the frame to one side of the bed or the other. This simple device solves the problem of attaching a pulley to a bedstead for it can be instantly secured to any bed by hanging it on the foot end of the bed, and, by placing a towel under the hooks, the highest brass or enamel finish will not be marked or disfigured. In case of a mahogany bedstead the hooks can be turned on their sides and the rack hung on as before, and by passing a cord around the foot board and rack and tying, the rack is securely held.

During my study of the subject of extension it occurred to me to test the friction of the ordinary pulley and I was surprised to find that with an eight pound weight the traction varied from three pounds to thirteen. Three pounds when the leg was sliding down in bed and thirteen pounds when an attempt was made to draw it up. I tested a goodly number of pulleys with spring traction scales and found them all so irregular and badly constructed that the amount of traction varied on the average about as above stated.

For treating tuberculous joints, uniform traction is most desirable but with the average pulley it can not be obtained. I therefore have constructed a simple pulley, but carefully drilled and mounted so that it will run with as little friction as possible. Thus we are provided with a practical pulley, and a ready and convenient means for securing it to any bedstead, and at any desired point.

I know of no more cumbersome, inconvenient, unsanitary and unsatisfactory device in surgical work than the ordinary spreader or foot-piece with a hole in the centre through which a rope usually passes, with a knot tied in the end (answering the double purpose of irritating the sole of the patient's foot and fastening the rope to the spreader), which is usually covered with cloth and either buckles, buttons or tapes attached, in the unsuccessful effort to arrange a convenient method of securing the ends of the adhesive straps which have been applied to the leg, to the spreader. It is unnecessary to mention how easily this appliance becomes



soiled and unsightly and how frequently the buckles and the button holes tear out and the tapes untie. To overcome these inconveniences, I have devised this simple appliance. A piece of hard maple five by two and three-quarter inches forms the spreader proper, and when applied the proximal surface is smooth with the edges rounded, so that there is nothing to irritate the foot. On the distal surface in the centre is a screw eye while sharp steel points projecting one-quarter of an inch are provided one either side of the screw eye. The screw eye answers the double purpose of receiving and securely holding the traction chain, and receiving a pin to secure the clamp which holds the ends of the adhesive straps. This clamp is simply a duplicate spreader bored in the centre and slipped on, where it constantly rides the traction chain. Holes are also bored in it to correspond with the projecting points on the spreader proper. To secure the ends of the adhesive strips they are simply turned round the ends of the spreader and pressed with the finger on to the steel points and then the duplicate spreader is slipped up on the traction chain, the screw eye passing through it sufficiently to receive the pin, which at once, when crowded through the screw eye, crowds the duplicate spreader down against the spreader proper, causing the steel points to pierce the adhesive strips and pass on into the holes prepared to receive them, while the adhesive strips are impaled upon the points and securely clamped between the two spreaders.

Having secured the pulley to the bedstead and the traction chain to the leg it now remains to pass the chain over the pulley and attach the weights. For convenience I have arranged a set of five weights, each three and one-half by four inches, varying in thickness to make them weigh from one to five pounds respectively. The weights have notches two on either side arranged to receive a chain which supports them in the following manner. Two pieces of chain about twenty inches long are hung from their centre in an inch harness ring. The four ends are then separated and secured to the four corners of a thin base plate which is the same shape as the weights. By passing the distal end of the traction chain through the harness ring, the ring may be readily slipped along the chain to near the pulley and secured there by passing a pin (which is attached for the purpose to the end of the chain), through a link in the chain. The base plate is thus suspended and ready to receive the weights, which are to be laid

upon it in such a manner that the chains rest in the grooves or notches in the weights. The base plate weighs one-half pound and the lightest weight one pound, and the heaviest five pounds, so that any amount of weight from one-half pound to fifteen and one-half pounds can be used.

The Kny-Scheerer Company, of New York City, have undertaken the manufacturing of the appliance and I believe the surgeon who puts it to the test will find it a most practical convenience.

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### Clinical and Pathological Notes

*Postural Treatment in Cases of Hypertrophy of the Prostate with Residual Urine.* By H. W. BOONE, M. D., Professor of Surgery, St. John's Medical College, Shanghai, China.

W. H., aged 60, June 10, 1902. Is a delicate looking man. Complains of pain above pubes and in perineum. He has difficulty in starting urination, the stream is weak, bladder always feels uneasy. At times urinates very often at night, has one small pile. On digital examination by rectum find enlargement of lateral lobes of the prostate. After he had voided his urine I passed a Condé catheter and drew off nearly three ounces of urine.

I was anxious to find some other method of relieving him which would avoid the necessity of the constant use of the catheter. There was an old bamboo lounge in the room with a hole in the cane bottom, so I placed a vessel under the lounge and told the patient to lie on his face the next time I visited him and try to void his urine into the vessel, he did so and I then used the catheter and drew off less than one ounce of urine. The next day I got him to lie down in the left latero-prone position and pass his urine. On passing the catheter no more urine could be drawn off and we found that he could obtain complete relief by using this position whenever he desired to urinate. I saw him from time to time for three weeks longer and he was quite contented, he had no more pain, no uneasy sensations in the bladder and he voided his urine without difficulty. He then went away and I lost sight of him. I have been looking for another patient to try this method of treatment on but no case has occurred in my practice.

In my case the left latero-prone position gave the greatest relief. In another case the prone position, or that with elevation of the foot of the couch at the same time may be more satisfactory. The position of the patient could be varied until it was discovered what one was the best for his individual case.

Anything which will save a patient from the constant use of the catheter and its accompanying dangers is greatly to be desired and I hope that the readers of this journal will try the postural method of treatment when an opportunity arises and report the results of success or failure. If only a small percentage of cases derive relief from this treatment, it is so simple and safe that it is worthy of trial before other methods of treatment are resorted to.

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*A Case of Acute Nephritis Complicated by Lobar Pneumonia in an Infant Seventeen Months of Age.* By JOHN M. GRIFFIN, M. D., Warrensburg, N. Y.

The following case of acute nephritis in an infant presents several points of interest. Chester B., age 17 months, parents living and well, has one brother who is strong and healthy. The great grandfather died of tuberculosis and the maternal grandmother, brother and uncle died of Bright's disease. Child had always been well and strong until the 25th of February, when he suffered from an inflamed cervical gland. The child also had a purulent otitis media of the left ear. On March 8th, I was called to see the child and obtained the following history. The swelling of the gland had disappeared but the discharge from the ear continued. The mother of the child noticed that the child had seemed very stupid and sleepy and took no interest in playing. She also noticed that the child had some pain in the back and that he passed very little urine which stained the napkin very dark. The child had vomited the day before I saw him. He was very restless and peevish and appeared to be in pain. There was a purulent discharge from both ears. Tongue was red and moist. Mucous membranes very anaemic. Skin was very pale and there was a slight puffiness of the eyelids. Temperature, 101.4 degrees; pulse, 120; respiration, 36. Over the lower lobe of the right lung posteriorly there is dullness. By auscultation over this area numerous small, moist and crackling rales could be heard. Breath sounds approach the



bronchial type. Abdomen prominent and tympanitic. There is no swelling of the feet and ankles. The scrotum was slightly edematous. The urine was dark red, slightly acid in reaction, Sp. Gr. not determined. Large amount of albumen, no sugar. Microscopical examination reveals red blood corpuscles, pus, epithelial cells and hyaline, blood, epithelial and granular casts are present in large numbers.

*March 10th.*—Patient is very ill and appears to be in pain and passed a restless night. Temperature, 101.2 degrees; pulse, 150; respiration, 44. Area of dullness has extended up higher posteriorly and there is only slight resonance over the anterior surface of the right lung. Over this area some large moist rales are heard. Respirations have an expiratory grunt and coughing seems to cause considerable pain. Only a very small amount of urine was passed during the past 24 hours, which could not be measured as it was passed in the napkin. Patient was put on milk diet, and a pneumonia jacket placed over chest. One pint of normal salt solution was injected per rectum 3 times a day. In the evening the temperature rose to 103.8 degrees; pulse, 166; respirations, 52. As the child did not sweat a hot air bath was given for about one-half hour, which produced profuse sweating. Strychnia 1-240 grain was given every four hours and nitroglycerin 1-600 grain every two hours.

*March 11th.*—Child passed urine once during the night and slept a little. Temperature, 103 degrees; pulse, 160; respiration, 60. Dullness over entire right and there were a few moist rales in the left lung. Child was constipated but an enema produced a good result. In the evening child seemed about the same and the abdomen was less distended. Child passed a small amount of urine during the day. Temperature 103.2 degrees; pulse, 170; respiration, 66.

*March 12th.*—Patient seems to have improved and slept well during the night. Bowels moved freely. Temperature, 101.8 degrees; pulse, 160; respiration, 60. Bronchial breathing over right lung but there are fewer rales.

*March 13th.*—Child slept well during the night. Passed urine five times during the night and morning in fairly large quantities and had three watery movements of the bowels. Temperature, 102.2 degrees; pulse, 140; respiration, 52. Over the right lung posteriorly the dullness is much dimin-



ished and the respiratory sounds are approaching the bronchovesicular type. There are some dry moist rales over the left lung. Puffiness of eyelids and scrotum is much less marked.

*March 14th.*—Condition practically unchanged. Temperature, 100.2 degrees; pulse, 130; respiration, 52. There is a small area of bronchial breathing over the posterior surface of the left lung.

*March 16th.*—Child seemed worse. There is a very marked puffiness of the eyelids. Temperature, 101.6 degrees; pulse, 160; respiration, 60.

*March 17th.*—Child is coughing more and has some difficulty in breathing. Temperature, 100.2 degrees; pulse, 140; respiration, 60. Condition of lungs unchanged.

*March 18th.*—Child passed a poor night and had an attack of severe dyspnoea. Passed urine three times, puffiness of the eyelids continues but there is no edema of the feet or legs. There is still dullness over the right lung.

*March 18th.*—Patient voided small quantity of urine and has had several attacks of dyspnoea.

*March 19th.*—Child voided urine once and passed a poor night. Dullness and bronchial breathing over upper lobe of right lung anteriorly. Flatness over base of right lung. In the afternoon he had a severe attack of dyspnoea and the face, lips and gums were very cyanotic, and the child struggled violently for breath. A hypodermic of nitroglycerin 1-300 and strychnine 1-200 grain every fifteen minutes produced relief and the child improved. Dr. Cunningham saw the case in consultation at this time and advised tapping the chest. Temperature, 101 degrees; pulse, 146; respiration, 60.

*March 20th.*—Patient had a very poor night and was breathing with difficulty. Face was very pale and pasty, and pulse very rapid and weak. The child was apparently unconscious. Aspiration of the chest was attempted but gave negative results and the dyspnoea continued. The child died in the afternoon.

Acute nephritis as a primary disease undoubtedly exists during infancy. If the urine of infants were examined more frequently by physicians more cases of this kind would be detected. Nephritis is very frequently secondary to the contagious diseases, notably scarlet fever. In the case just described the condition appeared to be primary and the pneumonia occurred during the course of the acute nephritis.

## Correspondence

“QUI S' EXCUSE S' ACCUSE.”

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## STATE OF NEW YORK—STATE COMMISSION IN LUNACY

FREDERICK PETERSON,  
DANIEL N. LOCKWOOD,  
WILLIAM L. PARKHURST,  
*Commissioners.*

T. E. MCGARR, *Secretary.*

ALBANY, June 18, 1903.

*To the Editor:*

The Commission hopes that the enclosed matter will prove of sufficient interest as to justify its insertion in the forthcoming issue of your esteemed publication.

Very respectfully yours,

T. E. MCGARR, *Secretary.*

RECENT PROGRESS IN MATTERS PERTAINING TO THE CARE OF THE INSANE  
IN THE STATE OF NEW YORK

Some of the measures of improvement in the care of the insane of the State of New York, carried through during the past few months by the Lunacy Commission, are as follows:

1. The Pathological Institute has been reorganized and more than sixty of the medical men connected with the staffs of the fourteen State hospitals have been instructed during the past winter at the Institute on Ward's Island in the recent development of psychiatry along clinical, pathological, psychological and clinical lines. The legislative appropriation for the Institute is now \$25,000 annually.

2. The hospitals have been opened to medical internes in the same manner as general hospitals. Last year sixteen clinical assistants entered the service in this way, and this year the number is nearer thirty.

3. The legislature recently passed the Lunacy Commission's bill for the appointment of a Medical Inspector to ensure a more thorough inspection of the thirty-nine institutions under its charge, viz: 23 private retreats, 2 criminal asylums and 14 State hospitals for the insane. Such inspection, especially of the private asylums, in which there are about 1,000 patients, has never been adequate.

4. To remedy overcrowding, the Lunacy Commission proposes to construct a new hospital in the territory north of Albany and Troy on the colony system—a scheme similar to that of the Craig Colony for epileptics will be carried out. The site will be selected and plans made this year. This colony for 1,500 to 2,000 patients should be ready inside of three years.

5. Three tuberculosis hospitals, each with a hundred beds, will be constructed this summer at a cost of \$90,000, at Middletown, Utica and Binghamton, on the grounds of the State hospitals located there; and the plans made by Dr. Peterson and the State Architect embody the main features of such hospitals described in the King Edward Prize Essays. In the meantime tent life for the tuberculous insane has been in vogue at the Manhattan State Hospital East (under Dr. Macdonald) for two or three years and for a shorter time at Binghamton and other of the State hospitals.

6. The country colony for a few of the working classes of the insane, as an offshoot of the Utica State Hospital, has been enlarged. A similar colony has been established at the Willard State Hospital, and two are in existence at the State hospitals at Binghamton and Poughkeepsie.

7. A new departure this year is the creation of a summer camp for between forty and sixty insane on the lake shore, about fifteen miles from the Rochester State Hospital, which is now in operation to the great delight of both patients and attendants.

8. The feature of nurses' homes having been found so useful at some of the hospitals, two additional ones will be put up this summer, one at Kings Park State Hospital, Long Island, for 300 nurses, and one at the Gowanda State Hospital for 100.

9. Six or seven residences for superintendents and separate houses for the medical staffs will be put up this season at as many of the State hospitals, thus removing the officials from the central main buildings and utilizing the vacated space for patients.

10. A bill providing for emergency commitments, recommended by the Lunacy Commission, was passed by the legislature at the last session. Copies of this law have been sent to all the examiners in lunacy of the State. It is believed that this will mean great good to the insane, and prevent the all too frequent incarceration of urgent cases in jails and station houses.

11. The improved ration brought about during the past six or eight months, though entailing an additional cost to the State of a hundred thousand dollars per year or more, has added greatly to the comfort of the patients and to the satisfaction of the medical officials and various visiting boards.

12. A strong effort is being made by the Lunacy Commission to increase the number of deportations of alien insane, and through the efforts of New York State the federal government passed a law making the limit three years instead of one; *i. e.*, an immigrant becoming insane within three years after landing in the United States may be returned to his own country.

13. The movement for the establishment of reception hospitals for acute curable cases in the large cities has gained strength. While the bill for the psychopathic hospital for New York City, which was to be the first of several such reception hospitals, failed to pass this year, it is believed that success will attend the Commission's efforts during the coming session.

## Editorial

Secondly, his diet. To which purpose I find a most remarkable passage in Burton, in his chapter entitled "Bad *diet* a cause of melancholy." "Amongst herbs to be eaten (he says) I find gourds, cucumbers, melons, disallowed, but especially *cabbage*. It causeth troublesome dreams, and sends up black vapours to the brain. Galen, loc. affect. lib. 3, cap. 6, of all herbs condemns cabbage. And Isaack, lib. 2, cap. 1, *Animæ gravitatem facit*, it brings heaviness to the soul." I could not omit so flattering a testimony from an author, who, having no theory of his own to serve, has so unconsciously contributed to the confirmation of mine.

CHARLES LAMB.

*On the Melancholy of Tailors.*

Quien Mucho  
Abraza  
Poco Aprieta.

The ANNALS publishes on another page a communication from the New York State Commission in Lunacy, showing some recent changes and progress in matters pertaining to the care of the insane. Progress in the care of the insane is greatly needed and this promise of remedy of many glaring defects is a healthy sign. The communication from the Commission may possibly be an answer to the comment in the June ANNALS upon the announcement of an amendment to the statute, in which it was shown no real advance had been made, but that an earlier condition, previously annulled by the Commission, had been restored by them in the interests of insane persons.

As the Commission may be acquitted from an attempt at self glorification, this communication is to be regarded as an expression of mild doubt as to the usefulness of the Commission and of a desire for friendly criticism from well-wishers in the medical world, among whom the ANNALS desires to be placed. In response to this letter of appeal it is proper to consider the progress made by the Commission in its management of the State and private hospitals for the insane and to estimate to what extent this progress is due to the originality and wisdom of the Commission. The changes now proclaimed are desirable. Many of them are actually necessary in an enlightened and philanthropic community, and are in the interests of the patients. But few are new; and they bear the stamp of actual progress mainly in so far as they restore or perpetuate customs of the past, or represent the efforts of the administration of the hospitals through their medical officers. It may be said, for instance, of Progress Number 2, that medical internes were admitted to the State hospitals before the creation of the Lunacy Commission. In respect



to the establishment of farm colonies (Progress, Number 6) it is difficult to understand what is meant, as farm colonies are not a novelty in the care of the insane, and the Willard Asylum was organized in 1869 as essentially and primarily a farm colony for chronic cases. Progress Number 11 deals with the matter of improved rations. It will be remembered that the dietary of the State hospitals has been the subject of a great deal of discussion, and that its standard has been criticised during the last few years as having been reduced too far by the action of the Commission. The patients may be congratulated upon the prospect of a square meal and the Commission upon recognition of the fact that measures of over-economy are not in accord with popular sentiment.

In Progress Number 3, a medical inspector is announced, who will perform the duties which are above all the function of the Commission, and particularly of its medical member. This seems to be a surrender of the vital function of the commission rather than progress. The great reason for the creation of the Commission was the visitation of the various hospitals, public and private, under their care, in order to ascertain from personal observation whether there were any abuses, defects or opportunities for improvement in these institutions, and to put into execution any desirable changes. The organization of a Commission, consisting of a physician, a lawyer and a business man, assured the consideration of all departments and relations of these hospitals in their entirety, and not merely in their medical aspects. It does not seem probable that this duty can be better performed by the Commission sitting in the State capitol and regulating the exceedingly complicated and varying affairs of these hospitals on the basis of reports from one visiting medical inspector, than it has been by personal observation and free and repeated consultations with medical superintendents. The communication states that this inspector is needed for more adequate supervision of the private hospitals. Such an inuendo about private hospitals does incalculable harm. It is directly contrary to the assertion of the Seventh Annual Report of the Commission in Lunacy for 1894-'95, that "No scandal or serious trouble of any nature has occurred at any of the private institutions during the year; indeed, it may be said that, as now conducted under the responsibility of frequent inspection and the lawful authority of a license, without which they cannot continue, the private in-

stitutions of New York State are meeting the just expectations of all concerned in their prosperity and of the public at large, whose interest in them relates to the safety and comfort of their inmates." The demand for accommodation in private institutions is a large one, and a statement which suggests the need of more inspection implies a doubt as to efficiency, which can only produce uneasiness among the friends of patients. The earlier statement seems a fairer analysis of the situation.

The glaring defect of circulars of this kind is the scant recognition of the administration of the hospitals. It is not surprising that such a circular should emanate from the State Capitol—it has the true bureaucratic aroma—but it is to be regretted. The medical officers of the hospitals bear the brunt of the battle, and develop the ideas for the betterment of their institutions, and the Commission grasps the glory. This habit is not limited to the Lunacy Commission, but is the backbone of a centralized government.

No definite information is given, but curiosity may be aroused by the statement of Progress Number 7, announcing the creation of a summer camp for patients on the lake shore near the Rochester State Hospital. The question is suggested whether this plan did not originate with the accomplished superintendent of that institution. Dr. Alexander E. Macdonald, of the Manhattan State Hospital, is the lucky man who is recognized, probably for the first time in the history of the Commission, as the promoter of a new idea (Progress Number 5), which the Commission will now, under the ægis of its own architectural resources, assisted by the King Edward Prize Essays, encourage other superintendents to imitate.

The ignoring of medical officers has been the practice of the State Commission since its organization. Their individual work should have recognition. In Progress Number 1 it is stated that "sixty of the medical men connected with the staffs of the fourteen State hospitals have been instructed during the past winter at the Institute on Ward's Island in the recent development of psychiatry along clinical, pathological and psychological lines." It is not stated how many days or hours were spent by each medical man in acquiring this extensive knowledge, but if the medical officers of the State hospitals do not know their business, they should be dismissed from the service at once. The director of the pathological department is a physician of ability and distinc-

tion, and his work is of great promise, but he would not assert that men of the large experience of the senior officers of the State hospitals (and the senior officers are not excepted) require instruction in their varied and responsible duties, or in knowledge of their art, except such as could be obtained in the customary methods of exchange of ideas between medical men.

The tone of this document is unfortunate. The President of the State Commission in Lunacy is a leader in his specialty. The profession looks to him to encourage in the lay members of the Commission respect for his professional colleagues, that their high ideals may be attained by cultivation of enthusiasm and individuality. With the exception of the Pathological Institute, whose inglorious history bids fair now to be redeemed, the Commission in Lunacy has not been responsible for any advance in the care of the insane, beyond the absorption and promulgation of the best thought of the physicians of the hospitals, who have had life-long training in their chosen work. The very title of the State Commission in *Lunacy* is a relic of barbarism.

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## In Memoriam

MATTHEW W. BENDER

Matthew W. Bender, the founder of the Bender Hygienic Laboratory, a scientific institution, which has revolutionized the practice of medicine in Albany and its vicinity, died at an advanced age on May 21, 1903.

The Board of Trustees, at a meeting held May 24, 1903, adopted the following memorial, which it is fitting the ANNALS should publish in recognition of the relations of Mr. Bender's gift to the advancement of medicine:

Yielding to the relentless processes of time, Matthew W. Bender, in the ninetieth year of his age, has passed to the great beyond. By his death Albany has lost a valued and respected citizen, one whose upright character and sound business principles not only won for him the confidence and esteem of his fellowmen, but gained for him a goodly fortune, much of which found its way to needy causes.

One of his generous acts was to build for Albany the Hygienic Laboratory which bears his name and we, the trustees of the institution, are

met to-day to record our sense of loss and pay a tribute of respect and honor to his name. Therefore, be it

*Resolved*, That in the death of Matthew W. Bender the Board of Trustees of the Bender Hygienic Laboratory has lost its first president, the donor of the Laboratory building and a public-spirited and generous citizen, whose modest life and generous acts have contributed much to the city in which he lived.

*Resolved*, That we deeply mourn his loss and extend to his bereaved family the expression of our sincere sympathy.

*Resolved*, That a copy of these resolutions be spread upon the minutes, published in the daily press and a copy be sent to the family.

## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, MAY, 1903.

<i>Deaths</i>			
	1901	1902	1903
From consumption .....	25	25	19
From typhoid fever.....	2	2	0
From scarlet fever .....	1	0	7
Whooping-cough .....	2	0	2
From diphtheria and croup.....	1	5	3
From grippe .....	2	0	7
From erysipelas .....	0	0	1
From cancer .....	11	9	9
From pneumonia .....	4	19	15
From broncho-pneumonia .....	2	1	3
From apoplexy .....	9	8	9
From Bright's disease .....	15	12	10
From accidents and violence.....	18	13	5
Seventy years and over.....	13	24	28
One year and under.....	13	20	10

### *Deaths in Institutions*

Albany City Hospital.....	14	14	8
Albany Orphan Asylum .....	1	1	1
County House .....	3	3	3
Home for Aged Men.....	0	0	2
Home of Friendless .....	0	0	1
Hospital for Incurables.....	0	1	0
House of Good Shepherd.....	1	0	0
Little Sisters of the Poor.....	1	1	1



	1901	1902	1903
Public Places .....	3	0	0
Sacred Heart Convent.....	1	1	1
St. Margaret House .....	1	1	1
St. Peter's Hospital.....	8	2	0
St. Vincent's Female Orphan Asylum .....	1	1	0
Homeopathic Hospital .....	5	2	3
Total number of deaths.....	139	166	151
Death rate .....	15.84	18.78	17.08
Death rate this year less non-residents	16.51.		

Marriages .....	63
Births at term .....	97
Premature .....	6
Still .....	6
Total.....	109

#### WORK OF HEALTH PHYSICIANS

Total number of assignments made.....	82
Total number of calls made.....	317

#### INSPECTIONS

During the month 80 markets were inspected, 9 fish venders, 2 meat peddlers, 4 ice wagons, 2 cow stables, 39 milk peddlers, 2 water peddlers, 8 slaughter houses, 2 hide houses, and the Public Market was inspected 14 times. There were found 2 milk peddler's violations. Nine inspections were made of the animal cemetery.

In the Bureau of Sanitation 79 inspections were made, of which 33 were plumbing and 46 sanitary, 51 reinspections were made. Seventy-two complaints were made during the month, of which 15 were of privies, 7 of closets, 7 of drains, 5 of plumbing, 1 of wells and cisterns, 3 of water, 3 of filthy yards, 1 of filthy cellar, 4 of filthy vacant lots, 2 of sewer gas, 5 of filthy premises, 3 of chickens, 2 of dead animals, 1 of cows, 5 of garbage, 2 of smoke, 2 of odors and 5 unclassified. There were found 19 nuisances abated on reinspection, and 11 complaints made without cause, 3 nuisances were found cleaned and 11 were referred to the Commissioner of Public Safety. There were 48 notices served.

In the Bureau of Plumbing, Drainage and Ventilation, 208 inspections were made of which 124 were of old buildings and 84 of new buildings. Thirty-two iron drains were laid, 39 connections with street sewers made, 40 tile drains laid, 38 cesspools put in, 34 wash basins, 41 sinks, 31 bath tubs, 29 wash trays, 9 trap hoppers in yard, 61 tank closets. There were issued during the month 144 permits, of which 97 were for plumbing and 47 for building purposes. Nineteen plans were submitted, of which 1 was for an old building and 18 for

new buildings. Fourteen houses were tested on complaint, of which 8 were by blue, red test and 6 by peppermint test, also 9 water tests were made. Thirty-five houses were examined on complaint and 30 re-examined. Twenty-two complaints were found valid and 13 without cause.

## BUREAU OF CONTAGIOUS DISEASE

*Cases Reported*

	1901	1902	1903
Typhoid fever .....	9	7	2
Scarlet fever .....	7	10	13
Diphtheria .....	56	23	23
Chickenpox .....	6	22	19
Measles .....	38	29	168
Whooping-cough .....	0	2	1
Consumption .....	1	1	2

Number of days quarantine for scarlet fever:

Longest..... 38    Shortest..... 11    Average..... 30+

Number of days quarantine for diphtheria:

Longest..... 45    Shortest..... 10    Average..... 21 $\frac{1}{2}$

Fumigations:

Houses..... 30    Rooms..... 77

## • ANTITOXIN

Cases of diphtheria reported in which antitoxin was used. 19

Cases in which antitoxin was not used..... 4

Total ..... 23

There were four deaths from diphtheria.

One was 5 months old, sick three days, antitoxin was used, and died of membranous croup;

One was 2 years 10 months old, sick 2 days, antitoxin was not used and died of membranous croup;

One was 2 years 4 months old, sick 17 days, antitoxin was used early, death caused by paralysis of throat;

One was 7 years, 8 months old, sick 6 days, antitoxin used. This was a case of scarlatina complicated with diphtheria.

## BENDER LABORATORY REPORT

Cultures for diphtheria.

Initial positive	Initial negative	Release positive	Release negative
9	28	22	12
	Unsatisfactory.....	7	
	Total.....	75	

## SMALL POX

Some Smallpox Statistics from the Annual Report of the Board of Health of the City of Cambridge, Mass., of interest:

Out of 75 vaccinated persons but 6 died. The total number of days quarantined for the 75 cases was 1,552.

Of 76 unvaccinated cases 25 died and the total number of days quarantine for the 76 cases was 2,307. The mortality therefore was four times as great among unvaccinated people and the period of quarantine one-third longer. In the unvaccinated cases none died after the third week and in the vaccinated cases none died after the twelfth day.

Smallpox Statistics, taken from the Annual Report of the Health Department, for the year 1901, of the City of Boston:

Total number of cases, February 1, 1901, to February 1, 1902, including a few cases from adjoining cities and towns (401 males and 280 females).....	681
Number admitted to Smallpox Hospital, Southampton street .....	544
Number admitted to Gallop's Island.....	132
Number left at home (too ill to be removed).....	5
	681
Total number of deaths was 108 (62 males and 46 females) or 15.85 per cent.	
Number of deaths at Gallop's Island.....	28
Number of deaths at Smallpox Hospital, Southampton street .....	76
Number of deaths at home.....	4
	108
Number showing evidence of vaccination.....	292
Number showing no evidence of vaccination.....	389
	681
Number of deaths among vaccinated.....	27
Number of deaths among unvaccinated.....	81
	108
Percentage of deaths among vaccinated.....	9.24
Percentage of deaths among unvaccinated.....	20.82

During the year, the Department of Health made about 185,000 vaccinations.

## Medical News

Edited by Eugene E. Hinman, M. D.

UNION COLLEGE COMMENCEMENT.—The class of 1903 of Union College said farewell to their Alma Mater on June 10, 1903, when the 107th commencement exercises were held in the State Street Methodist Church, Schenectady. The exercises were largely attended by friends of the graduates, undergraduates and Alumni. The Honorary Chancellor, Rev. Dr. Huntington, of New York City, delivered a very eloquent address. Orations were delivered by the following members of the class: John A. Bolles, "The Ethical Element in Politics;" Thomas R. Tillott, "Moral

and Religious Education as a Function of the State;" Henry A. Pierce, "The Measure of a Man;" Gordon E. Van Loon, "Ideals and Character." The valedictory was delivered by Thomas G. Delbridge, whose subject was, "An Age of Departed Greatness." The prize awards were as follows: Warner prize for highest standing in performance of college duties and moral deportment, Thomas G. Delbridge; Ingham essay prize, Henry A. Pierce; Allen essay prizes, G. W. Donnan, A. E. Bishop and H. A. Pierce; Blatchford oratorical medals, Thomas R. Tillott and Thomas G. Delbridge; Daggett prize, R. C. Donnan; Holleran engineering prize, Harry P. Willis; Porter scholarships, R. F. Hoxie, F. H. Powell and T. R. Tillott; Spier scholarship, John A. Bolles.

GENERAL COMMENCEMENT DAY FOR UNION UNIVERSITY.—At a recent meeting of the Board of Governors of Union College, a committee, consisting of Chancellor Raymond and Hon. Simon W. Rosendale, the deans of the Medical College, Law School and the College of Pharmacy were appointed to consider the proposition to observe one day for the commencement of all departments of the university. There are many good reasons for taking this step, and it is believed that it will be done.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR MAY, 1903.—Number of new cases, 63. *Classification of Cases*: Dispensary patients receiving home treatment, 3; district cases reported by health physicians, 6; charity cases reported by other physicians, 26; patients of limited means, 28; old cases still under treatment, 29; total number of patients under nursing care, 92. *Classification of diseases* (New cases): Medical, 11; surgical, 6; obstetrical, 23 mothers and 19 infants under professional care; dental, 1; eye and ear, 2; skin, 1. Transferred to hospitals, 1; deaths, 3.

*Special Obstetrical Department*: Head obstetrician in charge of all cases. Medical students in attendance, 1; assistant obstetricians, 2; Guild nurses, 4; cases, 4. Number of visits by head obstetrician, 2; assistant obstetricians, 2; by medical students, 14; by Guild nurses, 41; total number of visits for this department, 59: *Visits of Guild nurses* (all departments): Number of visits with nursing treatment, 651; for professional supervision of convalescents, 167; total for month, 818.

FIRST GRADUATES OF ST. PETER'S HOSPITAL TRAINING SCHOOL.—The first class of nurses was graduated from the training school for nurses of St. Peter's Hospital on the evening of June 8, 1903. The class consisted of Miss Gerheus, of Troy; Miss Margaret Leonard and Miss Mary Connolly, of Albany. Mr. James F. Tracey, of the Board of Governors, addressed the graduates, after which Rt. Rev. T. M. A. Burke presented the diplomas, taking occasion to make a short congratulatory address.

SHOWER BATHS IN SCHOOLS.—Another advance in providing for the public health has been made in several of our large cities. Public schools in New York, Philadelphia, Boston and several southern cities, have been provided with shower baths which have proved successful. There is a movement on foot to inaugurate the system in the schools of Albany. It is claimed that it would not only eliminate a large percentage of un-



pleasant results of cleanly children being closely associated with children who come from homes where the bath is almost an unknown luxury, but that the baths would be a preventive of disease, for many of our younger school children suffer from filth-bred diseases. Contractors have been asked to furnish estimates for placing the baths in a new school now in process of erection.

CHANGES IN STATE BOARD OF CHARITIES.—At a meeting of the State Board of Charities, held in New York May 7th, President William R. Stewart's resignation was accepted at his urgent request. Dr. Enoch Stoddard (A. M. C. '63), who was formerly vice-president of the board, was elected president and Dr. Stephen Smith, of New York, was elected vice-president.

POLLUTION OF WATERWAYS.—The State Health Commissioner is sending out blank forms to local health authorities for reports on the location of such manufacturing and industrial plants along streams and lakes in this State as would make it possible for such establishments to discharge refuse and sewage into such waters and thereby cause pollution. Under a law passed by the last legislature all such discharges are prohibited hereafter, and the State commissioner is determined to see to it that the law is enforced.

INSPECTION OF BARBER SHOPS.—Cleanliness is to be the rule in the barber shops of this State in future. The State Board of Examiners will issue certificates to all who do a barbering business, and regular inspections of the shops will be made. Every barber must have his certificate, and if the board, or any of its inspectors, after examining a shop, shall find it is being run by incompetent men or is not clean and in good hygienic condition, it shall have the power to revoke the license after written charges have been served upon him and a public hearing had.

REORGANIZATION OF COLLEGE OF PHYSICIANS AND SURGEONS.—The College of Physicians and Surgeons of Columbia University is to be reorganized. The curriculum has been revised and hereafter the medical school will be placed on a post-graduate basis similar to the law school. Hereafter no student will be admitted who has not completed a three year scientific course in some college or passed the Columbia entrance examinations. A new department of pharmacology and therapeutics is to be established under the direction of Prof. C. A. Herter. Drs. McLane, the dean, Tuttle, Peabody and Wier have resigned, although Dr. Wier remains as clinical professor of surgery. Dr. Cragin will become professor of gynecology; Dr. Holt, of the diseases of children, and Dr. James, of medicine.

CONFERENCE OF HEALTH OFFICIALS.—The first conference of State and national boards of health under the act of July 1, 1902, began here June 2, 1903. Surgeon-General Wyman, of the Marine Hospital Service, presided. Twenty-one States were represented. Dr. Wyman in an address said that the great end in view was closer association and union of effort between State and national health authorities. Dr. Foster, of California,

described quarantine operations in that State, particularly in relation to the plague danger in San Francisco. He said that with the vigorous cleaning of Chinatown the fear of another attack of this disease was rapidly disappearing. He attributed the success achieved to hearty co-operation between the city, State and national health officers in endeavoring to stamp out the infection. The conference adopted the following resolution:

*Whereas*, The conference of the State Boards of Health of the United States, with the public health and Marine Hospital Service, having confidence in the earnest efforts and ability of the Governor and State Board of Health of the State of California, acting in harmony with the Bureau of Public Health and Marine Hospital Service thoroughly to eradicate bubonic plague, heretofore existing in the city of San Francisco, do resolve that in the judgment of this conference, so long as the present effective work is continued, there is no need for quarantine restrictions of travel or traffic to or from that State.

**THE INDEX MEDICUS.**—A few months ago it was officially announced that the Carnegie Institute was to undertake the resumption of the publication of the *Index Medicus*. The Carnegie Institute did not agree to assume the entire financial responsibility of its publication, but did agree to make up any deficit to the amount of \$10,000 a year for a period of three years. The subscription is \$5.00 a year, and so far the number of subscriptions is falling somewhat short of what is necessary to assure its continuance. This is unquestionably a matter of vital importance to the entire profession throughout the country, and we would urge our readers to interest themselves in subscribing for it.

**PNEUMONIA EPIDEMIC.**—While not generally considered an infectious disease pneumonia has assumed such a form for the last few months in Chicago. The official report to the Surgeon-General at Washington on May 19th shows that from January 1, 1903, to May 16th, there have been 2,659 deaths from this disease, nearly two and one-half times as many as from consumption. This record is little less than astonishing, and would seem to call for its inclusion among the diseases calling for special protective measures from the profession. Its communicability seems to be so well established that it should be held as warranting all the sanitary restrictions thrown around cases of tuberculosis. As an instance of its ravages in one group of persons, it may be mentioned that thirteen men, employees of the City Treasurer's office, have died from pneumonia during its prevalence in the last few months.

**INTERNATIONAL MEDICAL CONGRESS.**—The fourteenth International Medical Congress recently held in Madrid, Spain, was highly successful, especially from a social standpoint. Nearly seven thousand physicians were present, representing the leading medical societies of the world. The chief topics under discussion were cancer, malaria and tuberculosis. No definite conclusions as to the cause of cancer, satisfactory to the majority of the scientists, were reached. Many claimed a parasitic origin, while equally as many thought it due to a degenerative process in the tissues owing to some morbid condition, the cause of which is yet unknown. The transmission of malaria by the mosquito was discussed, and it was agreed that

the insect plays an important rôle in the spread of this disease. The papers and discussions on tuberculosis contained no new facts, but summarized the investigations of the past year. The next meeting of the Congress will be held at Buda Pest.

PERSONAL.—Dr. STILLMAN HAM (A. M. C. '02), has opened his office at 929 State street, Schenectady, N. Y.

—Dr. EARL JACKSON (A. M. C. '02), is practicing at 237 Liberty street, Schenectady, N. Y.

—Dr. H. Z. PRATT (A. M. C. '87), has removed from Greenbush Heights to 400 West 145th street, New York, City.

—Dr. WILLIAM H. MURRAY (A. M. C. '69), of Albany, has removed to 290 Lark street.

—Dr. JOHN GUTMAN (A. M. C. '02), has opened his office at 71 Grand street, Albany, N. Y. Dr. Gutmann has just completed a term of service at the Albany Hospital.

—Dr. WILLIAM A. ALEXANDER (A. M. C. '90), is practicing at 937 State street, Schenectady, N. Y.

—Dr. HARRY GORMLY (A. M. C. 1900), is located at 1320 Broadway, Watervliet, N. Y.

—Dr. CLAYTON HASKELL (A. M. C. '01), has been appointed assistant surgeon at the Soldiers' Home, Bath, N. Y.

—Dr. THOMAS CUNNINGHAM (A. M. C. 1900), is a resident surgeon at the Soldiers' Home, Bath, N. Y.

—Dr. JOHN J. OSTERHOUT (A. M. C. '98), is practicing at Marlow, N. H.

—Dr. IRA HARRIS (A. M. C. '81), is U. S. Consul at Tripoli, Syria, and the head of the general hospital in that city. Dr. Harris was recently in Albany for a few days.

—Dr. JAMES F. ROONEY (A. M. C. '98), has removed from 72 Philip street to 123 Grand street, Albany, N. Y.

—Dr. DOUW H. VAN DERZEE (A. M. C. '98), has been appointed assistant physician at the State Reformatory, Elmira, N. Y.

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## Book Reviews

*Handbook of Materia Medica, Pharmacy and Therapeutics*, including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy and Minute Directions for Prescription Writing. By SAMUEL O. L. POTTER, A. M., M. D., M. R. C. P., Lond.; Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco; Author of the "Quiz Compends of Anatomy and Materia Medica," "An Index of Comparative Therapeutics," several articles in Foster's "Practical Therapeutics," and "Speech and Its Defects;" Major and Surgeon of Volunteers, U. S. A. Ninth Edition, Revised and Enlarged. Pages, 951. Philadelphia: P. Blakiston's Son & Co. 1902.

That a text-book on *Materia Medica* should pass through nine editions in fourteen years is almost a sufficient guarantee of its merit, and but

little can be justly said in criticism of this most excellent work. Its greatest value to the student in medicine, after its completeness and accuracy, lies in the brevity and clearness with which most of the statements are made, and the absence of that reiteration common to many of the text-books which teachers are forced to place in the hands of students.

The Tables of Equivalents of Weights and Measures Customary and Metric, of Specific Gravities and Specific Volumes, and of Drops in a Fluid drachm of Various Liquids, will prove of value, fully as much to the older practitioner as to the student of to-day. The Tables of Differential Diagnosis, however, always of doubtful value, would seem to belong more properly in a work on the practice of medicine; uranalysis is not very closely allied to materia medica, nor yet to therapeutics, and the formulæ of various patent medicines are entirely out of place in a work that claims to be a standard text-book for the education of the student in medicine, nevertheless they are to be found in this work.

Of the thirteen articles re-written, those on Cinchona, Digitalis, and Ergot in the section on Materia Medica, and the ones on Diabetes, Gonorrhœa and Phthisis are noticeably improved, while the one which deals with Adrenal Extract is distinctly disappointing in that its method of use in hay fever and as a hemostatic are so lightly passed over. Forty new articles are inserted in the section on Materia Medica, most of them on remedies sufficiently new to have warranted their omission. Of the new articles in the section devoted to Therapeutics, the one on Anæsthesia, and those on the so-called "Tropical Diseases," are especially valuable, Dr. Potter's experience of three years as a surgeon in the United States Army in the Philippine Islands making him an authority of no small qualifications on the latter. The insertion of items from current medical literature (300 of which, according to the preface, are to be found), is an innovation which will meet with general approval.

This work has been the prescribed text-book for the students of the Albany Medical College for the past year, and is received with favor both by the teachers and the students.

S. L. D.

*Obstetrics.* A Text-book for the Use of Students and Practitioners. By J. WHITRIDGE WILLIAMS, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-chief to the Johns Hopkins Hospital; Gynæcologist to the Union Protestant Infirmary, Baltimore, Md. With Eight Colored Plates and Six Hundred and Thirty Illustrations in the Text. New York and London: D. Appleton & Co. 1903.

Since the work of Lusk on Midwifery, we have seen no volume which impresses us so favorably as this book on Obstetrics, by Dr. Williams. Lusk easily took the first place as an American authority and a classic, and the same position may be assigned to Williams, as a worthy successor. It is sometimes difficult to describe the differences which make one medical text-book better than another. In modern medical literature there are not apt to be discrepancies in statement or marked disagreement as to methods. The opinions of authorities, when sufficiently mature to have obtained recognition in a text-book, are generally approved. In estimating the value of such a book the facts, then, are not important, but the manner



of their exposition. In the last generation, or even in the last decade, work has been done upon the various problems of obstetrics, and advances in the knowledge of these problems has been made, as, for example, in the mechanics of the expellent forces. But these are unimportant as compared with the modifications of obstetric practice due to asepsis and hygiene. Upon the treatment of these topics rests the value of any modern book, and to the manner of this treatment must be ascribed the very great value of Dr. Williams' volume. He is not content with the remark that aseptic principles must be observed (which is not infrequently sufficient for our authors), but has incorporated in every description of obstetric manoeuvres the detailed application of aseptic technique. This alone should bring the book into the hands of every practitioner engaged in midwifery practice. We know there are men of years of experience with hundreds or thousands of cases, who need no instruction, but even for them the review of ideas under the guidance of a richly illustrated and peculiarly lucid text cannot fail of interest.

Along the same line is the discussion of puerperal diseases, in which is now recognized the important rôle played by infection. To this, particularly in nervous conditions, the author, following Berkley, adds cases arising from auto-intoxication. This etiology, to our mind, is not sufficiently emphasized. The treatment, apart from local procedures for the removal of septic foci, is too strictly symptomatic. It is important that the practicing obstetrician should recognize, which he generally does not, the great source of nervous manifestations in the intestinal tract. We should place the cholagogue and saline first in therapeutics, and not late, after such pre-eminence of hypnotics and tonics.

The author prefers the recumbent position of the patient during parturition, as against the lateral now generally adopted in Europe, which surely has its advantages. He speaks in no uncertain terms upon the necessity of cow's milk in artificial feeding of the infant. He urges the immediate repair of perineal lacerations between the second and third stages, not awaiting the delivery of the placenta.

The illustrations, by Miss Katherine M. Montague and Mr. F. S. Lockwood, and the letter press are admirable. With the exception of the word "perietal" on page 288, no error of any kind has appeared. We predict enduring fame for this exceptional volume.

*The Medical and Surgical Uses of Electricity, Including the X-ray, Finsen Light, Vibratory Therapeutics and High Frequency Currents.* By A. D. ROCKWELL, A. M., M. D.; Formerly Professor of Electro-Therapeutics in the New York Post-Graduate Medical School and Hospital; Fellow of the New York Academy of Medicine; Member of the American Academy of Medicine; Member of the New York Neurological Society; Formerly Electro-Therapeutist to the Woman's Hospital in the State of New York, etc. With Two Hundred and Fifty-two Illustrations. New Edition. New York: E. B. Treat & Co. 1903.

Dr. Rockwell issued in 1896, under his name alone, a new edition of the work on Electricity, which for eight previous editions had been ascribed

to both himself and Dr. Beard, though Dr. Beard's death had occurred after the publication of the second edition. The issue of 1896 was re-cast and became practically a new book. The present edition is a reprint of the issue of 1896, with modifications in the text, elaboration of the article on the X-ray, and the addition of Chapters on the Finsen Light and Vibratory Therapeutics. The changes of the text of the previous edition are not numerous. They consist chiefly of an extension of the discussion of electro-therapeutics, as, for instance, in the chapter on Special Medical Diseases, in which the use of electricity in Bright's disease is exploited.

The genius of this book lies in the therapeutic application of electricity, for its constitutional tonic and sedative effects. The earlier editions brought out the value of general faradization and central galvanization. The author maintains his faith in these methods of application, but finds in the static machine and the high tension soil sources of electricity of great power, and in the description of these modifications brings the work abreast of the times in its particular field.

The author believes that relief of renal congestion may be effected by either the high tension faradic current or the static wave current. The revisions of the text deal especially with these manifestations of electricity, which have become more popular during the last four years. The annexed chapters on the X-ray, Finsen Light and Vibratory Therapeutics are lucid expositions of the uses of these agents.

*The International Medical Annual.* A Year Book of Treatment and Practitioner's Index. Edited by Thirty-three Contributors. Pages, 720. New York: E. B. Treat & Co. 1903.

Each year witnesses an enlargement of this volume, needed to meet the increased demands of medical progress, and indicates more clearly the necessity of such a work, to epitomize what has been accomplished the preceding year.

The abstracts are well selected and have been made not only to show the most recent advances, but also to be helpful to the general practitioner. Much space is given to the diagnosis, the changes in the blood and the most recent treatment of phthisis, rheumatism and typhoid, three diseases in which the average practicing physician would be most interested. The value of the X-rays in diagnosis and treatment is considered at length, and five photographs are given illustrating what may be accomplished in determining the presence of stones in the urinary passages.

The importance of the Shiga bacillus in dysentery is noted.

The diagnosis of hip-joint affections is fully treated, and the method of Brun in reducing congenital dislocations made plain by sixteen radiographs.

This volume is easily the equal of its predecessors and is of the greatest value for ready reference.

## Current Medical Literature

### SURGERY

Edited by A. Vander Veer, M. D.

*Observations Regarding the Surgical Treatment of Carcinoma of the Intestine. (Chirurgische Erfahrungen über das Darmcarcinom.)*

J. VON MIKULICZ. *Archiv für klinische Chirurgie, Band LXIX, Heft II.*

During the last eleven years 106 cases of malignant tumors of the intestines, excluding the rectum, have been observed in the clinic at Breslau. Five of these cases were sarcomata, one was an endothelioma, while 100 were carcinomata.

Of these 100 cases, five involved the small intestine and ninety-five the large intestine. Of the 106 cases, 80 occurred in men and 26 in women. The youngest patient was 16 years of age. Eighty-two of the cases occurred between the years of 40 and 70. In 31 cases the tumor was located in the sigmoid flexure, in 20 cases in the caecum, in 12 cases in the splenic flexure, while the other portions of the large intestines were involved very much less frequently.

The clinical symptoms of carcinoma of the intestines were extremely irregular. The higher the tumor is situated, however, the more marked, as a rule, is the disturbance. The complications of carcinoma of the intestine are usually the first symptoms of the disease. These are stenosis, ulceration and hemorrhage. Ulceration and hemorrhage can usually only be successfully diagnosticated in tumors of the lower part of the intestine. The most constant symptom which develops either sooner or later in practically every case, is stenosis, although unfortunately it is not an early symptom. Palpation of the abdomen is frequently of but little assistance for the large tumor of the intestine may be ulcerated to such an extent as to cause comparatively few symptoms, while the small tumor which can not be located, may produce the most marked symptoms.

De Bovis has distinguished three types of the disease: first, the type of absolute or relative latency; secondly, the gastro-intestinal type; thirdly, the type of severe occlusion. The writer, however, prefers to distinguish first, the period of latency; secondly, the period of the initial symptoms, and thirdly, the period of the demonstrable symptoms. The period of latency is very difficult to determine, but appears to be from 1-2 to 3 years, which is mainly due to the relative benignancy of carcinomata of the intestine, because of the relatively slow metastasis to the glands as well as to the other viscera. With regard to the initial symptoms the cases are divided into two groups: first, cases without characteristic disturbance of the intestine, to which group 58 of the 106 cases belong, and secondly, cases in which there is more or less marked disturbance of the intestine, to which group 48 cases belong. Of these 48, 39 presented a picture of chronic stenosis, 5 of acute ileus and 4 of chronic ileus. The period of clinical demonstrable symptoms depends largely upon when the patient presents for examination.

Of the 106 cases reported 84 presented more or less functional dis-



turbance of the intestines and in only 22 was such a disturbance absent. The differential diagnosis is extremely difficult and in doubtful cases an exploratory incision is to be advised.

The question of treatment is an extremely important one, and has been much debated. Of the 106 cases, 23 presented with acute ileus. Of the remaining 83 cases, 17 were not operated upon; in 7, exploratory incision was done with no mortality; in 6, colostomy with no mortality; in 16, entero-anastomosis with intestinal exclusion, with 3 deaths; in 37 cases, resection of the intestine was done with 11 deaths. Of these 37, 21 were resected with immediate suture and of this number 9 died, with a mortality of 42.9%. In 16 cases, resection of the intestine, with the resected ends of the gut left in the wound, was done, with two deaths, a mortality of 12.5%. A number of surgeons have hitherto advised resection with immediate suture and the mortality in cases in which this has been done has been in the neighborhood of 40%.

The writer has devised a new operation, which consists in a so-called extra-peritoneal resection of the intestine, which is performed in the following manner: the tumor, with the adjacent portion of normal intestine, is separated from its attachment, mesenteric or peritoneal, to such an extent as to allow it to be brought completely outside the abdomen. The healthy afferent and efferent portions of the intestine are sutured to the parietal peritoneum, after which the wound is closed, except the portion through which the intestine protrudes. The tumor is then resected, either immediately or after the lapse of from 12 to 24 hours, and an artificial anus is thus established, which is closed at some subsequent time after the patient has improved in strength. In this way the danger of peritonitis and the shock of a long continued operation are avoided. The mortality of 12.5% in the cases in which this operation was performed, as compared with 42.9% in the cases in which resection with intestinal suture was performed, certainly speaks in its favor.

Of the 37 cases in which a radical operation was done, 11 died as a result of the operation and 6 have not been traced. Of the remaining 20, 9 died from recurrence from 3 1-2 months to 5 1-2 years after the operation. One is still living after 13 months, with recurrence; 10 are living from one-fourth to nine and one-fourth years after the operation and apparently are free from recurrence. The cases in which colostomy was done have lived from one and one-half months to four and one-half years since the operation, while the cases in which entero-anastomosis was done, have lived from one and one-fourth to nine and one-half months since the operation.

It may be said in general that the higher the situation of the carcinoma in the intestine, the more unfavorable is the prognosis.

#### *Carcinoma Recurrence. (Ueber Carcinomrecidive.)*

C. VON KAHLDEN. *Archiv für klinische Chirurgie*, Bd. 68, Hft. 2.

Recurrence of carcinoma can occur in the region of the field of operation only when epithelium is left in this region, which is already carcinomatous or later becomes carcinomatous.



The writer classifies the possibilities of recurrence under four general heads:

(1) Recurrence due to the fact that certain portions of the original carcinoma were left behind.

(2) Recurrence due to the fact that some of the regionary lymphatic apparatus was already infected and was left behind. Even in very early carcinoma, infection of lymphatics at some distance from the tumor may have occurred. The carcinoma may extend along these lymphatic channels either by continuity or embolism.

(3) Recurrence due to implantation of carcinoma cells in the wound at the time of operation. This mode has been much emphasized in recent literature, but does not appear to deserve the importance usually attached to it. While this mode of recurrence is possible it is certainly of infrequent occurrence. The conditions offered by a fresh wound are all of them unfavorable for the subsequent development of implanted cancer cells, and furthermore the implantation experiments performed by Thorn and others have in almost every instance been negative. One is, therefore, justified in assuming that as the cause of a recurrence only when all of the other possibilities have been excluded.

(4) Recurrence due to so-called pluricentric development of carcinoma.

Petersen has demonstrated this mode of development in certain carcinomata of the skin and instances of more or less simultaneous or at any rate independent development of carcinomata in two different organs are not wanting, as for instance primary carcinomata of both ovaries.

The pluricentric development of carcinoma may also be pluri-temporal, the different foci developing at different times.

It thus follows that in the region of a carcinoma there may be other independent centres of development so early and so insignificant as to escape detection at the time of operation, and these may subsequently produce recurrence. In certain other cases some of the epithelial cells in the vicinity of a carcinoma may simply possess the tendency toward development into carcinoma, which tendency may later give rise to so-called late recurrences. These late recurrences may also in certain instances be examples of the development of new independent carcinomata.

Schmidt and others have called attention to the interesting fact that by no means all emboli of carcinoma cells give rise to secondary growths, for such emboli have been observed in the lung, liver and other organs in which the cells presented the appearance of advanced degeneration and no evidence whatever of proliferation.

## MEDICINE

**Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.**

*Dimness of Vision in Diseases of the Kidney Characterized by Albuminuria.*

RAMSEY. *Glasgow Medical Journal*, December, 1902.

The clinical association of defective sight with disease of the kidneys did not escape the observation of the older physicians. Bright in his "Record of Medical Cases," in some of which ocular symptoms were among the

earliest as well as the most striking features, makes special mention of it, and after the invention of the ophthalmoscope, knowledge of the subject became more and more exact. In 1859, Liebreich published a detailed description of the ocular changes in Bright's disease. Albuminuric retinitis, he said, presented on ophthalmoscopic examination, features so characteristic, that whenever they were recognized, Bright's disease could be diagnosed with absolute certainty. Liebreich's statements had, however, to stand the test of further observation, and experience has shown that although what he said was in the main true, yet there are many exceptions, as the similar form of neuro-retinitis, which is occasionally found in anæmia and in tumor of the brain. The graphic picture of albuminuric retinitis, first published by Liebreich, is still, however, looked on as a piece of classic clinical description, but there are many variations from the typical picture. There may be associated with Bright's disease very strongly marked visual defects unattended by any gross lesions in the fundus oculi, and cases of dimness of sight connected with diseases of the kidney characterized by albuminuria may, therefore, be divided into two classes: (1) uræmic amaurosis where the ophthalmoscope reveals no gross lesions in the retina (2) retinitis albuminurica where marked retinal changes are present. Uræmic amaurosis occurs most frequently in those cases of Bright's disease in which cerebral symptoms predominate. It may exist alone, but is more frequently accompanied by headache and vomiting, and an attack is often preceded by a convulsive seizure. Cases of albuminuric retinitis divide themselves into two groups according as the lesions in the fundus oculi are inflammatory or degenerative. The inflammatory form is characterized by the occurrence of œdema, hemorrhage and inflammation, and is usually found associated with dropsy, and with the presence of albumen in considerable quantity in the urine. It is rare to find albuminuric retinitis present at all during a first attack of acute parenchymatous nephritis. The eye changes occur most commonly when the acute attack supervenes on previously existing chronic nephritis. The neuro-retinitis comes on suddenly and runs a violent course. The degenerative form has its origin in pathological changes in the retinal arteries. The arteries are irregularly contracted, and even the very smallest exhibit a brightness of the central light streak which is very characteristic. There are always present minute white dots, whose stellar arrangements around the macula, and bright shining appearance, are perhaps the most characteristic feature of the ophthalmoscopic picture. To diagnose a case of albuminuric retinitis by the ophthalmoscope is much easier than to appraise its true significance. The main point to remember is that it is a late manifestation in the course of renal disease, that, as a rule, it is associated with the phenomena that are attendant upon high arterial tension, and that its onset may be determined by general toxæmia, vascular degeneration, or by these conditions combined. The prognosis will obviously be more favorable in the inflammatory group than in the degenerative, because in the former the toxic elements may be removed from the blood. Many cases of recovery from albuminuric retinitis are on record, but their interest depends not so much upon the disappearance of the eye changes, as upon the removal of the cause of the albuminuria. Sight is not usually

lost through albuminuric retinitis alone, and the degree of amblyopia present depends upon the amount of destruction due to degeneration, and to the position of the retinal hemorrhages.

*Reflexes: Their Relation to Diagnosis in Rheumatoid Arthritis.*

R. LLEWELYN JONES. (*The Lancet*, December 27, 1902.

That the reflexes are increased in rheumatoid arthritis has been known for some years, since Garrod first called attention to the fact, giving the number of cases in which this symptom appeared as thirty-seven out of fifty. Jones investigated the subject by examination of the reflexes in asymmetrical types of the disease, and found exaggeration, more particularly of the deep reflexes, on the affected side. Some peculiar phenomena were noted. Thus, assuming the joints of the ring and middle fingers to be diseased, the flexor tendons at the wrist exhibited a more vigorous response than the extensors, the reverse being the case with disease of the index and thumb. When one of the lower extremities was the seat of disease the reflexes were markedly exaggerated in comparison with those of the other limb. In a few cases Babinski's sign was found. In the lower limb the superficial reflexes were variable, but a striking harmony was observed between the gluteal and plantar reflexes. When one of these is sluggish the other was apt to be the same. The knee jerks were often increased to a degree compatible with sclerosis. They were often clonic. Ankle clonus was fairly common.

The increase in myotatic irritability was one of the first symptoms to appear and one of the last to leave. It maintained its high grade long after the joint troubles were quiescent. In the visceral reflex mechanisms there was rarely any alteration. There was occasionally diminished light reflex of the pupil.

*A Contribution to the Subject of Fatal Hemorrhages from the Stomach.*  
(*Beitrag zur Kasuistik tödlicher Magenblutungen.*)

MAX TIEGEL. *Muenchener medicinische Wochenschrift*. No. 47, 1902.

Von Mikulicz distinguishes two varieties of hemorrhage from the stomach; the one characterized by such profuse bleeding from the erosion of one of the larger branches of the arteries that the patient dies from acute anemia, the other characterized by frequently repeated small hemorrhages, which may last for weeks or months. The latter variety are more amenable to surgical treatment.

Von Mikulicz advises either pyloroplasty or gastro-enterostomy, rather than excision or cauterization of the ulcer. The first variety of cases are exceedingly difficult to treat surgically, mainly because of the difficulty in finding the bleeding point. If the ulcer is large enough to have caused some evidence of its existence upon the external wall of the stomach, the



operation is not so difficult, but if, on the other hand, the ulcer be situated in an inaccessible place, or be associated with comparatively slight changes, it may be quite impossible to find it. One must always bear in mind that the smallest ulcers may give rise to the most severe hemorrhages. The writer reports several cases of the kind from the literature and adds three cases from the laboratory of Professor Weigert. In two of these cases repeated hemorrhages extending over a period of twelve and fourteen days respectively, resulted in death, and at autopsy it was only with the greatest difficulty that the ulcers were discovered, being only two or three millimeters in diameter, but in each instance having eroded an artery of considerable size. In the third case the hemorrhages lasted only two days, were extremely profuse and at autopsy it was only with the greatest difficulty that an ulcer, perhaps three millimeters in diameter, was discovered, situated along the lesser curvature.

The most interesting characteristic of these cases was the minimal lesion of the mucous membrane of the stomach, which was associated with fatal hemorrhage. The writer believes that these cases should lead to a more careful examination of the mucous membrane of the stomach in that class of cases generally described as, "hemorrhages from the stomach without pathological lesions," and he believes that in many of these cases some small lesion with the erosion of an artery will be found. He also suggests that these extremely small ulcers may give rise to relatively larger hemorrhages than the large ulcers, because of the fact that there has been less inflammatory change in the region of the ulcer and less tendency to obliteration of the artery, and that furthermore there is less tendency to thrombosis in these eroded arteries than in those associated with larger ulcers.

## OPHTHALMOLOGY

Edited by C. M. Culver, M. D.

### *The Treatment of Myopia.*

R. LIEBREICH (Paris). *London Ophthalmic Review*, February, 1903.

The first point made by the author is to declare it a mistake to take the whole orbit into account for measurements and statistical researches as to the influence of its form and position upon anomalies of refraction and upon strabismus. The results of his researches upon this question differ from those heretofore published. It is, he says, only the nasal half of the orbit that is worthy of consideration; that asymmetry, with reference to this, is universal. He calls the angle that is formed by the lines passing through the centres of the two eye-balls of a pair and the foramen opticum, the angle B. Variations in the amplitude of this angle are commensurate with degrees of difficulty in the exercise of positive convergence; as a remedial measure, he combines prisms with concave glasses, for the use of children in what he calls the prodromal stage of myopia, and he says: "I confess I consider such a use of prisms as the



only positive means of preventing the progress of myopia." His thesis is elaborately defended in the article in question. In conclusion, he says, that for more than forty years he has very frequently used prisms and decentred lenses in re-establishing harmony between convergence and accommodation as the only remedy in frequent cases of anthenopia. When he retired from practice in London, forty-two years ago, most of his patients were advised to leave the prisms alone; hence his insistence, in this article, upon renewed and closer study of the question.

*A Contribution to the Question of the Pathogenesis of the Bacillus, Subtilis, Especially for the Eye. (Ein Beitrag zur Frage der Pathogenität des Bacillus subtilis, besonders für das Auge.)*

B. KAYSER. *Centralblatt für Bakteriologie, Bd. XXXIII, No. 4.*

The so-called hay bacillus, or to speak more technically the bacillus subtilis, has been generally regarded as a perfectly harmless organism, which when present in infected tissue was there by accident. Kayser mentions the fact that certain Italian workers proved by experimental research that the bacillus subtilis was pathogenic to certain of the lower animals under some circumstances. Perles, and also Lobanow, showed experimentally that the introduction of the bacillus subtilis in pure culture into the vitreous and anterior chamber of the rabbit's eye led to infection, which assumed the form either of a panophthalmia, or of an iridocyclitis. Later a case was reported at the Heidelberg congress where a foreign body wound of the eye became infected with a resulting ophthalmia, in which the bacillus subtilis in pure culture was isolated from the infected eye. Later Poplawska reported that in twelve cases of foreign body ophthalmia he was able to isolate a bacillus which corresponded to the bacillus subtilis in eight cases. The author reports two new cases of foreign body ophthalmia in which he was able to isolate the bacillus subtilis in culture, as well as to observe it in cover-slips. In both cases the introduction of the foreign body was followed by a marked panophthalmia, necessitating the complete removal of the eye-ball. In one case the bacillus subtilis was present in pure culture, and in the other associated with the ordinary pus cocci. The author experimented on animals with the subtilis obtained in these cases, and was able to produce experimentally panophthalmia, especially by inoculation of the vitreous. By the use of large doses he was also able to cause the death of animals by intraperitoneal injections. Experiments with filtrates of his cultures showed that these were entirely inert, so that evidently the lesions were due to the presence of toxic substances in the bodies of the bacillus themselves.

The results of the observations herein recorded are certainly different from those usually obtained by the bacillus subtilis, and probably indicate that under certain circumstances organisms which are ordinarily saprophytic may take on pathogenic characters.

# ALBANY MEDICAL ANNALS

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## Original Communications

### REPORT OF A SERIES OF CASES FROM THE MATERNITY DEPARTMENT OF THE ALBANY HOSPITAL.

*Read before the Medical Society of the County of Albany, February  
18, 1903.*

By WILLIAM H. HAPPEL, M. D.,  
Attending Obstetrician to the Hospital.

#### INTRODUCTION.

The following series is composed of cases of interest occurring in the maternity ward of the Albany Hospital during the various services of the writer.

In addition to the case itself, its history, symptoms, diagnosis, treatment and the result, it seemed proper to add a short exposition of the present state of our knowledge on the condition described, together with the different views of various accepted authorities on disputed points.

#### A. PUERPERAL ECLAMPSIA.

N. P., aged 40, married. Pregnant about seven and one-half months. Entered the hospital November 1, 1899. Had been seen two days previously at her home. Condition very grave. Refused to be transferred to the hospital. Edema of the face and slight edema of the legs. Estimated quantity of urine per day, four ounces; urea one-half per cent. On the first of November she became partly delirious and was removed to the hospital. The percentage of albumen present on the day before her removal could not be estimated from the undiluted urine by the albuminometer. When properly diluted it was considerably over twelve per cent. On her entrance late at night she was put in a hot

pack, but as is frequent in these cases, there was no marked diaphoresis. The amount of urine for the first twelve hours equaled twelve ounces.

At noon, November 2d, labor was induced by the Barnes' bag; transfusion of normal salt solution, patient in hot pack, croton oil one minim. At three p. m., the os being widely dilated, forceps were applied and a male child, weighing three and one-half pounds, was delivered. Up to this time the amount of urine equaled four and one-half ounces.

She was now put on caffeine, three grains, and suppositories of theobromine, twenty grains each, every two hours. This patient was not a favorable subject, being a confirmed alcoholic, having atheroma of the arteries and also a systolic mitral murmur. Nevertheless, in the twenty-four hours after delivery she passed one hundred and fifty ounces of urine, became thoroughly conscious and conversed intelligently. On the third of November she lost sight, but on the fourth regained it, and could count fingers at a distance of thirteen or fourteen feet. The flow of urine continued, and when seen at twelve-thirty p. m. of that day, she seemed practically out of danger. About thirty minutes later she had a convulsion and in less than ten minutes was dead. No autopsy. The child died a few weeks later. No autopsy.

*Diagnosis*, chronic nephritis. The microscopical condition of the urine revealed casts, hyaline and granular, also blood casts, red blood corpuscles and kidney epithelium. The patient evidently succumbed to an exacerbation of this chronic condition.

There is another condition of the kidneys which is seen fairly often (six per cent.) during pregnancy. It is most frequently seen in primiparæ. It is known as the kidney of pregnancy, or Rayner's disease. The urine contains albumen in varying amounts, but there are no grave organic changes. The earlier theories concerning this condition supposed its cause to be purely mechanical. There was first, the theory of congestion, which naturally falls to the ground from the fact that the kidneys of this condition are always anæmic; the theory of pressure; the theory of excessive hydræmia, causing high arterial tension. The general opinion to-day is that the anæmia is due to the effete materials of the fœtal circulation, causing tonic contraction in the renal arteries and a diminished blood supply, with fatty infiltration and insufficiency of the renal cells. The condition shows itself about the sixth month by the presence of albumen in the urine and oliguria. The urine contains fatty elements without red corpuscles, but some leukocytes. There are usually previous to this some headache, lumbar pains and slow cerebration. Hyaline and granular casts may be present, though frequently they are absent. There is also increase in the number of heart beats and in the amount of arterial tension. The face and extremities become anæmic. If the disease advances there is increase in the albumen and casts.

There are vertigo, visual disturbances, tinnitus aurium, nausea, vomiting, epistaxis, and apoplexy or eclampsia may close the scene. At times the albumen is intermittent. More rarely still it does not occur until labor has begun. Then it may suddenly appear in large quantities and is usually followed by a severe convulsion. Finally, there is a tendency for this condition to recur in succeeding pregnancies. While this condition is usually quite amenable to treatment, the prognosis must be guarded because of the danger of complications. There is always anæmia and the general health is quite bad. In making the diagnosis it is necessary to distinguish between this condition, the kidney of pregnancy, and chronic nephritis. In the kidney of pregnancy the symptoms occur late, at the sixth month, and grave symptoms occur, even later than this. There is an absence or a small number of casts of the hyaline or granular variety. There is no retinitis. It ends usually with labor. There are no organic lesions. In true nephritis symptoms occur before conception. Grave symptoms occur early in the pregnancy. Casts are usually present and in large numbers. There is usually retinitis. The disease persists after labor and there are marked organic lesions. The only other condition with which it is possible to confuse this one is a pyelonephritis occurring late in the pregnancy.

Two such cases are reported by Schafer following influenza. The treatment is to a large extent prophylactic, consisting of a careful diet. Milk is the best food for these cases and all heavy meats and vegetables should be disallowed. Attention should be given to proper hygiene, and absolute rest in bed should be advised. The medicinal treatment consists in giving large draughts of water, proper diuretics, laxatives (Hunyadi). As a tonic and diuretic combined, Basham's mixture is probably the best. In order to control threatening convulsions bromide or chloral should be given in full doses when necessary. If the condition grows steadily worse, as shown by the increase in the albumen, which may reach ten to twelve per cent., or if eclampsia actually supervenes, there is nothing left to do but to induce labor.

#### B. POLYHYDRAMNION: DILATED FETAL HEART AND PATENT DUCTUS BOTALLI.

N. D., aged 28, married, native of Italy, admitted November 1st, 1899, house wife; habits good; personal history good. Mother living, aged sixty. Father died at the age of eighty-five, cause unknown. One brother and one sister living, one dead.

She complains of some pain about the cardiac region and suffers some-



what from dyspnœa. She has had four children, two living, two still-born. With one she says her abdomen was greatly enlarged. Last menstruation nine months ago. No nausea or vomiting. Areolæ of breasts large and pigmented; the follicles of Montgomery enlarged. Abdomen presents a tumor in the median line which impinges on the diaphragm; the flanks are resonant; there is a marked percussion wave. No fetal movements or parts can be felt. There is no ovarian facies. The cervix is high and patulous, not obliterated; a bruit can be heard on the right side of the abdomen, when patient lies on that side, between the umbilicus and the anterior superior spine. There is some blueness of the cervix and the anterior vaginal walls.

*Diagnosis, polyhydramnion.* On December 14th the cervix appeared dilated and the fetal part could be felt. On December 16th the patient was taken to the delivery room at nine P. M. The amnion ruptured just as she was put to bed. The vagina was immediately plugged with the fist and the fluid allowed to escape slowly; about three gallons were collected, but a large amount was lost. The fetal heart was now audible with the stethoscope, the beat very strong but slow, being sixty-eight per minute. The second sound was strongly accentuated and there was a long interval between it and the return of the first sound. At eleven-thirty, there being signs of exhaustion on the part of the mother, the forceps was applied and a male child was delivered. R. O. A., child dead.

*Autopsy, Dr. ELTING.* The following is an abstract from the Bender Laboratory report: "Infant apparently born at term. The right heart is distinctly enlarged, the ductus Botalli measures four millimetres in diameter at either end. There are atelectasis of both lungs and chronic passive congestion of the spleen and kidneys."

Polyhydramnion is considered to exist when the amount of fluid measures more than four pints. It occurs once in two hundred cases and is more frequent in the multiparæ, most so in twin pregnancies. It occasionally reaches the amount of six gallons or more and is due to one of two general conditions, over-secretion or deficient absorption. Over-secretion may be maternal, foetal or both. Leopold believes it is to be entirely maternal; Playfair entirely foetal; Virchow that it is always combined in character. When due to maternal cause or causes we find serous effusions present elsewhere in the mother, or some chronic disease, for example, syphilis. There may be chronic anæmia or pronounced hydræmia. The intimate relation between the latter condition and polyhydramnion was so well recognized that it gave rise to the aphorism that the thinner the maternal blood the greater the quantity of liquor amnii. Diabetes and leukemia may accompany this disease. Sometimes there is an acute onset after trauma. The fluid of polyhydramnios contains a lymphagogue, which may possibly stimulate the serous exudate from the mother.

*Fœtal sources:* When this condition arises from the fœtus it may, among other causes, be due to abnormal pressure in the vessels of the cord. Sallinger injected large amounts of fluid into the umbilical vein and found that rapid transudation took place from it into the amniotic sac. The amount of the transudation was in direct ratio to the size of the cord and the pressure to which the fluid was submitted. Jungbluth discovered that there existed during the first half of pregnancy a network of capillaries in connection with the vessels of the cord, just beneath the amnion in that portion of the chorion covering the placenta. Levison showed the persistence of these vessels in polyhydramnion, and canalicular spaces between these vessels and the inner surface of the amnion. Hence, increase in the pressure in the cord must cause this condition. The following are the causes of such increased pressure: syphilis of the fœtus, causing cirrhosis of the liver or phlebitis, (these are generally accompanied by œdema, ascites or general anasarca of the fœtus) venous stasis with transudation into the cord, obstruction of the ductus Botalli, placental tumors, fœtal tumors, valvular disease of the fœtus, velamentous insertion of the cord, which exposes it to pressure, and twisting of the cord.

Amnionitis is often the cause of the acute form, which is an exceedingly grave condition. Deciduitis is sometimes the cause of the polyhydramnion. Indirectly, hypertrophy of the placenta may cause an increase in the liquor amnii by causing a corresponding hypertrophy of the heart and kidneys of the fœtus, with excessive secretion of the urine and sweat. That the skin may play an important part in the production of polyhydramnion seems likely from the fact that it is frequently found associated with nævi and elephantiasis cystica congenita. In unioval twins there may be an unequal division of the vascular system of the placenta, so that one twin outstrips the other, which again necessitates hypertrophy of the heart, etc., as above, with the result of polyhydramnion in one sac and oligohydramnion in the other.

It is interesting to note that Schafer reports two cases of acute polyhydramnion in which the fathers both suffered from latent gonorrhœa. They infected their young wives. Later both fathers developed epididymitis, and although microscopical examination of the semen showed it to be healthy the wives remained sterile subsequently in both cases.

Finally, polyhydramnion is found associated at times with hydrocephalus of the fœtus.

In the acute form the symptoms are marked. There are intense pain, extreme and rapid distension of the abdomen, with moderate rise of temperature, which is due usually to the causal amnionitis. The recumbent position is impossible. Sometimes there is incessant vomiting, there is profound dyspnœa, sometimes even orthopnœa. In extreme cases there are lividity of the face and irregular pulse and respiration. In the chronic form the symptoms begin to appear about the sixth month. There is much discomfort, and when there is pain it is due to traction on the abdomen, which is always more enlarged by far than the time of the pregnancy would warrant. These pains may sometimes resemble labor pains. A slight disturbance of the general health may be present, together with depression and some insomnia, the respiration is impeded, and palpitation occurs, due to the partial displacement of the diaphragm. These patients sometimes complain of neuralgia of the abdominal walls, pelvis and lower extremities, which is due to pressure on the pelvic and sacral plexuses; due to interference with the pelvic circulation; œdema of the genitals and legs occur. The urine is scanty and albuminous, on account of the obstruction to the renal circulation, sometimes icterus is present, due to pressure on the ducts. The indigestion which occurs is due either to reflexes from the extreme uterine distension or directly to pressure on the abdominal viscera. Occasionally ascites occurs from pressure on the portal vein.

In a marked case of polyhydramnion the physical signs very easily reveal the condition. The most striking of these is the extreme distension, so that at the end of the sixth month the uterine tumor reaches the diaphragm. The uterus can be felt as a tense, somewhat elastic body, which produces a sense of fluctuation under the hand. When the fœtus can be felt it is easily displaced and even inverted. The fœtal heart sounds are greatly diminished or not audible. On vaginal examination there are found an os situated high, an obliterated cervical canal, a tense elastic and sometimes fluctuating lower uterine segment. The fœtal heart is always difficult to palpate. Curiously, the presenting portion of the amniotic sac is relaxed. It is necessary to distinguish this condition from ascites, ovarian cyst and multiple pregnancy.



## FROM ASCITES.

## HYDRAMNION.

The uterus is detected as a round mass, there is dullness over the round spherical body in the median line. There is a tympanitic note in the flanks. Change of position has no effect. There is no effusion elsewhere. There is not much decrease in the urine. There may be traces of albumen, there is little or no thirst. The umbilicus rarely protrudes.

## ASCITES.

Uterus not detected or with difficulty, even when pregnant. With the patient on the back there is dullness in the flanks and resonance over the other portion of the abdomen. If there is an intercurrent pregnancy, sufficiently far advanced there is dullness over the entire abdomen. The dullness changes with the change of position, usually there are effusions elsewhere. The urine is diminished and turbid. There is great thirst. The hypochondria are much distended and the umbilicus protrudes in extreme cases.

It must, however, be borne in mind that due to pressure, ascites may accompany hydramnion.

## FROM OVARIAN CYST.

## HYDRAMNION.

The uterine tumor is high and difficult to feel. There are other signs of pregnancy, such as cessation of the menses. There is a history of pregnancy with sudden increase in size after the fifth month. *Cloasma gravidarum*. Emaciation does not occur except in extreme cases.

## OVARIAN CYST.

The uterus is low, even with pregnancy. The menses do not cease, unless the tumor is double. There is a history of slow development covering many months. There is ovarian facies. Emaciation is marked.

## FROM MULTIPLE PREGNANCY.

## HYDRAMNION.

The tumor is tense and enlargement is late; the vertical diameter is the greater. There is fluctuation and ballottement. There is inability or great difficulty in palpating the foetal parts. The lower uterine segment is unusually tense. The presenting part is difficult to feel. The foetal heart sounds are faint or inaudible.

## MULTIPLE PREGNANCY.

The tumor is not tense. There is not such uniform distension. The enlargement occurs early. The transverse diameter is the greater. Neither fluctuation nor ballottement. Palpation reveals a large number of foetal parts. The presenting part is easy to feel. The foetal heart sounds are distinct and sounds of different rates may be heard.

The differential diagnosis between these two conditions is, however, sometimes difficult, for example, in polyhydramnion of one sac.



These pregnancies rarely reach term. During labor the first stage is slow, due to the feeble uterine contractions. The second may be precipitate, due to the sudden escape of amniotic fluid, the immaturity and smallness of the fœtus. In the third stage, because of the uterine inertia, there is danger of post partum hemorrhage.

The tendency in polyhydramnion is toward an increased susceptibility to infection. Involution is slow and incomplete. Otherwise the prognosis is favorable except in acute cases, which are, fortunately, rare.

For the child the prognosis is much graver; fully twenty-five per cent. die because of malformation, prematurity, faulty presentations or disease.

The treatment in the acute form is immediate evacuation. This is accomplished by dilating the os and puncturing the sac. Exceptional care must be taken to prevent hemorrhage, which is best done by the judicious use of ergot. In the chronic form the abdominal bandage sometimes gives a great deal of relief. If the mother's heart becomes greatly disturbed it is wise also here to induce labor. This should be delayed as long as possible in the interest of the child. The membranes should always be punctured through the internal os, never through the abdominal walls, although this is not particularly dangerous.

Puncture of the sac does not necessarily mean abortion and may sometimes be done several times. If the case comes to normal labor and dilatation is delayed by the large amount of fluid, puncture is here also the proper procedure, and should be practiced between pains, with the hips well elevated; after puncture or rupture of the membranes the vagina should be thoroughly plugged with the fist of the operator and the water allowed to drain off slowly by means of opening and closing the fingers, as a sudden change of pressure in the pelvis, which would take place on sudden escape of the fluid, might produce serious syncope, even death. After the third stage, both in the chronic and in the acute form, great care must be taken to prevent hemorrhage.

#### C. THYMUS DEATH: LYMPHATISM.

F. C., male, born in the Maternity Ward of the Albany Hospital October 26th, 1899. Weight six and three-quarter pounds. Measurements normal. The child gained steadily until November seventh, when it weighed seven and one-half pounds. On the ninth there was no gain, though the

child-had not been ill. At four P. M. the child was found cyanosed at the mother's breast. Physical examination shows dullness over the manubrium, extending into the third left space, a little beyond the parasternal lines. On the right side the dullness extends to the manubrium and the corresponding space. The child is unconscious. Its inspiration crowing. Reflexes abolished and pulse slow, gradually becoming slower. Inspiration becomes quicker and shorter, then both cease. The child becomes rigid, cyanotic and pale. The thorax is arrested during inspiration. Child now becomes limp. The glottis is closed. After about thirty seconds a loud inspiratory shriek ushers in the respiration and heart beat, completing a marked attack of laryngismus stridulus. The attacks repeat themselves several times in this way, the child never becoming conscious in the intervals. Death at eleven P. M. Diagnosis, thymus disease, lymphatism.

*Autopsy*, Dr. ELTING: "Thymus measures 5.5 x 4 x 2 centimetres. It extends down to the lower border of the third rib. There are pulmonary cedema, cloudy swelling of the liver, angiomas of the liver and some lymphatism."

The thymus gland occupies the anterior mediastinum between the innominate artery and left common carotid in front of the trachea and left innominate vein. It consists of two lobes, its length in the new born is four and one-half centimetres, and the width antero-posteriorly one and one-half centimetres.

Deaths of this character were described as early as 1830 and, according to Kopp, were due to mechanical interference, as was also the asthma that accompanied the enlargement of this gland. In 1858 Friedleben, after anatomical research and physiological experiments, denied the validity of this theory. His views were pretty generally accepted, although there were a few dissenters, among them Virchow, who in 1865 showed by autopsies the possibilities of death occurring, due simply to the enlargement of the thymus gland.

In 1884 Somma presented the first case of death, which was proved to be due absolutely to an enlarged thymus pressing on the trachea. In 1888 Grawitz presented a number of cases of sudden deaths in which there were no changes found at autopsy, except a large thymus. In 1889 Paltauf, inquiring into the condition known as status lymphaticus or lymphatism, again denied the mechanical theory of thymus death, and asserted that death occurred simply as a result of the tendency to sudden demise, due to the lymphatic anæmic constitution of the subject. He demanded proof of the mechanical cause. Evidently he did not know of Somma's case. The larger number among the profession accepted

this view, though there were some notable exceptions, among them Jacobi.

Of late years there have been reported a number of cases in which not only stenosis of the trachea was proved, but in which resection of the thymus relieved the dyspnoea or prevented actual death. That such a condition is not only possible, but probable, becomes plain when we recollect that the superior aperture of the thorax in the infant only measures one and five-tenths cubic millimetres by two and five-tenths cubic millimetres. It is also possible that pressure on other structures, such as the large vessels and the heart, may cause death.

With regard to the condition of lymphatism just mentioned it is defined as being a congenital anomaly of the constitution, characterized by lack of resistance to morbid influences, which predisposes to sudden death due to cardiac failure, especially among children with enlarged thymus, and adults when exposed to cold baths or to the action of anæsthetics. The stigmata of this condition are greater pallor of the skin, enlargements of systems of lymphatics (cervical, axillary, inguinal), hypertrophy of the tonsils, adenoids, enlargement of the intestinal glands, swelling of the spleen and malpighian bodies, presence of enlarged thymus, especially at a time when it has usually disappeared, narrowness of the aorta, dilated and relaxed, sometimes degenerated heart muscles.

The truth probably lies in the middle. Death has undoubtedly been caused mechanically as well as in the manner of Paltauf.

The symptoms of enlarged thymus and the lymphatism that usually accompanies it are as follows: the children are pale and pasty; they appear well nourished, even overfat. The subcutaneous lymph glands are enlarged, the spleen is palpable. There are enlarged posterior adenoids and tongue follicles at base. The thymus may be outlined by percussion. There is struma, sometimes prurigo. The blood shows a leucocytosis. These children frequently die during an attack of laryngo-spasm, a condition that is often found associated with lymphatism, or they die suddenly under anæsthesia, or, as in the deplorable case of the son of Professor Langerhans, under the prick of the antitoxin needle. Artificial respiration and tracheotomy are useless. Death is due to heart failure within a few minutes as a rule. These patients react badly also to acute febrile infection, especially diphtheria, which often takes on a septic form, or very readily in-



vades the respiratory tract. Most of the cases occur between the ages of several hours to two years; most frequently between the sixth and sixteenth month.

When death occurs it usually happens in the following way, as described by Pott: the children suddenly bend the head backward, make a gasping but noiseless effort at inspiration, roll up the eyes, while the face and lips become cyanotic and the veins of the neck become turgid. The face then becomes grey and in one or two minutes the child is dead. The heart ceases with the beginning of the attack. The pulse and reflexes are abolished. No form of stimulation has any effect. In a few cases death may delay for from two to three hours.

While the diagnosis of the condition of lymphatism is fairly easy and hypertrophy of the thymus may reasonably be suspected, the demonstration of the latter fact presents considerable difficulty. It is claimed, however, by Blumenreich, who has seen a large number of cases, that within the first five years of life gentle percussion will outline the gland. The area of dullness represents an equilateral triangle, the base line connects the sterno-clavicular articulations and its apex is situated at the level of the second rib. Increase of one cubic millimetre in the lateral boundaries denotes hypertrophy. The prognosis for enlarged thymus and lymphatism should be guarded, especially in the presence of acute disease or under operation.

The treatment is prophylactic and consists in the administration of iron, arsenic and cod liver oil, and of tincture of iodine and iodide of potash ointment locally.

In an attack of dyspnœa the patient should be put in a sitting posture with the head forward. In this position intubation and tracheotomy should be practiced when necessary. If these fail, thymoplasty or resection.

#### D. ASCENDING INFECTION OF KIDNEYS: INFECTION IN UTERO.

M. K., aged 20, married, admitted to the maternity ward December 26, 1899. Temperature on admission 101.2°; pulse 132, very weak. Family history, negative. Patient has a cough. There is puerile respiration over the right apex and some dullness. There is a tumor in the abdominal median line extending well up toward the diaphragm. Liver and spleen are very much enlarged. The patient at one time vomited blood. The character of this blood was not stated. Neither is she sure that she did not perhaps cough up this blood. She had also at one time, she does not know how long ago, some vaginal discharge. Last



menstruation occurred in April. She has vomited a great deal. There are sordes on lips and teeth. The tongue is black and swollen, the breath extremely offensive. Examination of breasts and abdomen reveals the usual signs of pregnancy, including fetal movements and fetal heart beat. December 27, A. M., pulse 140, temperature 100°; P. M., pulse 124, temperature, 99°. The vomiting was fairly well controlled by matzoon and liquid peptonoids. For the bad condition of her heart she received strychnine grain one-sixtieth hypodermatically. Later this was increased to grain one-thirtieth *q. r. h.* The bowels are very loose, moving four to eight times daily. December 28, A. M., pulse 126, temperature 99°; P. M., pulse 124, temperature 101°. December 29, membranes ruptured six-sixteen A. M. At seven-thirty, because of mother's condition forceps were applied and the child delivered, but dead. A hypodermatic injection of ergot was given and a small perineal tear repaired with catgut. Temperature 101.2°, pulse 160, collapse, death three P. M. The diagnosis in this case was divided between sepsis and typhoid fever. The Widal test was not made in this case for some reason, nor was the urinary examination made with sufficient exactness, but a few pus cells were noted. There was also some possibility of pulmonary tuberculosis, but no sputum could be obtained as the patient was actually unable to expectorate. It is unnecessary to add that every means of stimulation was exhausted without the slightest result.

*Autopsy*, Dr. ELTING: "Kidneys infected with staphylococcus aureus pyogenes, also general infection of the blood and organs with the same. Dilatation of both ureters, pyoureter, slight pyonephrosis, acute spleen tumor, cloudy swelling of the liver, swelling of the mesenteric lymph glands, slight arterio-sclerosis, persistent Meckel's diverticulum. Baby K. Slightly under term. Two openings to foramen ovale, patent. Hemorrhages into serous membranes, lungs, liver, spleen and kidneys; cloudy swelling of liver with focal necrosis, atelectasis of both lungs, general infection with staphylococcus pyogenes aureus."

This form of disease is due to some obstruction to the outflow of the urine, together with some acute infection, beginning low down in the urinary passages. The most common causes are enlarged prostate, cystitis, stricture, uterine and ovarian disease, pelvic inflammation, pregnancy, procidentia. It is about seven times more common in males than in females, and is much more frequent in middle life. The symptoms are usually latent or are covered by the original condition, unless the attack is very acute or long continued; in the former an acute nephritis, in the latter a chronic form, characterized by increase in the urine, low specific gravity, acidity, and turbidity, due to the cystitis and moderate albuminuria and some blood. The microscope shows hyaline and granular casts, epithelium, pus, blood, triple phosphates and sometimes micro-organisms. Dropsy is usually absent.

The diagnosis follows from what has been said. When the disease is removable (pressure of the pregnant uterus) and no cystitis exists the prognosis is good, otherwise almost uniformly fatal. With regard to obstetric cases and their treatment we must be guided by the urgency of the case. Induction of labor may become necessary.

The possibility of septic infection *in utero* by transmission from the mother was at one time absolutely denied. While it is somewhat rare and some organisms and diseases are more readily transmitted than others, the fact that septic micro-organisms may be transmitted from the mother to the child through the circulation by way of the placenta, or through the foetal digestive tract by way of the amniotic fluid, which the child swallows, is to-day well established.

#### E. PURULENT MENINGITIS COMPLICATING PREGNANCY.

S. M., widow, thirty-seven years, shirt maker, admitted October 4th, 1902, near term, mother of eight children. On entrance she had a convulsion, consisting of both tonic and clonic spasms. She then became unconscious for fifteen minutes, and after that fell into a deep sleep for one-half hour. After this she had an attack of vomiting. The immediate examination of the urine showed the following, specific gravity 1.025, albumen, hyaline and granular and epithelial casts, some red cells. Physical examination showed œdema of the face and extremities. The patient complained of severe headache. Absolute rest in bed and liquid diet were ordered. The patient, however, was rebellious in both respects, remaining about and succeeding in obtaining considerable solid food surreptitiously. She also refused to take her medicines (Basham's mixture); nevertheless she improved a little until the eleventh, when, after a particularly flagrant breach of orders she had a severe convulsion lasting fifteen minutes. This was followed by three more on the following morning. The urinary condition, however, was somewhat better. While making preparations for induction of labor on the 13th, at one p. m., she suddenly had precipitate labor and was delivered of a female child, weighing seven and one-half pounds. No more spasms occurred until the fifteenth, when she had two. Upon cessation of these convulsions there was found a flaccid paralysis of the right arm. The patient now became stuporous. On the sixteenth the whole right side became affected in the same way. It was the opinion of the obstetrician that the condition was uræmic. The pulse now became extremely rapid, reaching 150. The patient was kept in a hot pack and received a transfusion of 1000 centimetres, saline, four times a day. On the seventeenth the same condition remained, the patient had two more convulsions and became delirious and extremely noisy. Occasionally it was possible to rouse her sufficiently to answer questions by "yes" or "no," which she always did screaming at the highest pitch of her voice. The pulse rate remained about

the same. On the twentieth there was discovered a converging sybilismus of the left eye, and the fact that the hitherto flaccid paralysis had now become spastic. On the twenty-first, on account of the extreme noisiness of the patient, she was removed to Pavilion F. During the evening of this day she developed for a short time conjugate deviation. The urine on this date in addition to the usual deposit again showed some blood. On the following two days the patient suddenly began to clear up. She became rational, asked for food and began to move the paralyzed arm and leg. The strabismus improved and the pulse rate fell. Up to this time the four daily transfusions and two hourly hypodermics of strychnine and Basham's mixture had been continued. Temperature had remained elevated throughout. It seemed now that the original diagnosis of uræmic hemiplegia had been correct and that the patient would recover, when suddenly on the morning of the twenty-fourth two severe convulsions occurred, followed by death. *Diagnosis, uræmic hemiplegia.*

Uræmia sometimes produces hemiplegia, aphasia or monoplegia. The literature on this subject is scant. The paralysees are characterized by the fact that they tend to recovery and much more completely and earlier than those due to organic brain disease.

*Autopsy by Dr. BLUMER.* "Infection of the placenta. Retention of blood clots after delivery over an area at the fundus. Subinvolution of the uterus. Thrombosis of the veins in the left broad ligament. Thrombosis of some branches of the right pulmonary vein. Thrombosis of the longitudinal sinus. Multiple thrombosis of certain cerebral vessels with areas of softening. The largest ones are on the right side of the cortex near the vertex. There is one over the frontal lobe and another in the region of the upper parietal lobule, and a third on the left side, anterior to the fissure of Rolando. In connection with all these there is a certain amount of yellowish, grayish pus. There is a chronic adhesive pleurisy of the left side, cloudy swelling of the heart muscle, liver and kidneys. Acute spleen tumor. All cultures are sterile, except those from the uterus and thrombosis, which show streptococcus pyogenes and proteus vulgaris."

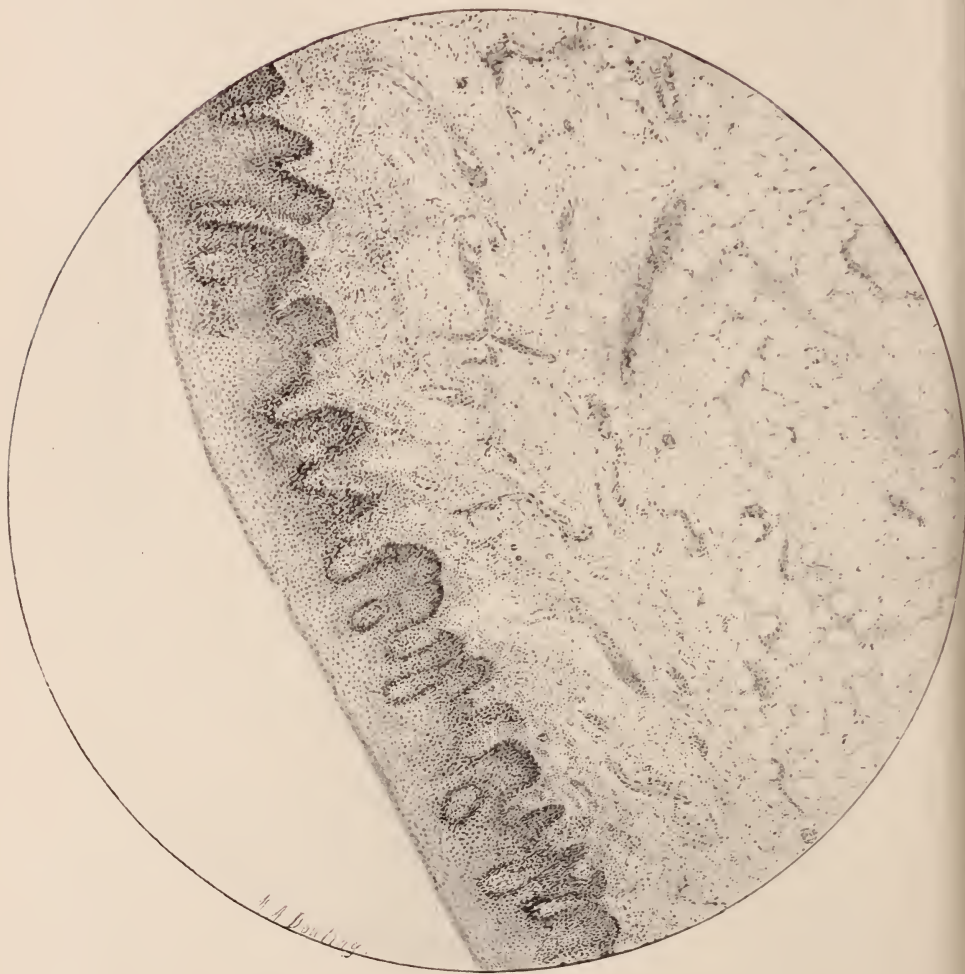
The patient was evidently infected before entrance into the hospital, and no vaginal examination was made at any time and delivery occurred before the house officer could be summoned. The only injury that occurred was a slight perineal tear immediately repaired under the usual precautions. There was a febrile movement from the day of entrance, which gradually increased in severity. At the time of the spastic condition she was seen by the consulting neurologist. It was also his opinion that the basis of the condition was uremic. In fact, it is impossible to see how, without other signs, it was likely to be anything else. Meningitis is so rare a complication of pregnancy that it did not enter into





To Illustrate Dr. Theisen's Article. A Case of "Lipoma of the Tonsil."

*Albany Medical Annals, August, 1903.*



our consideration. The only things that might have suggested a lesion of the brain or its envelopes, were the strabismus and the conjugate deviation, which latter, however, lasted but a short time. But in view of the fact that they could be explained uniformly with the right sided paralysis by uremia rather than by supposing an organic basis as their cause, which would have necessitated the assumption of a multiplicity of lesions, which actually existed, it certainly seemed more rational to explain the condition in the manner in which we did.

Since writing the above a similar case has been reported in the *London Lancet*, in which a meningitis complicating pregnancy was also mistaken for uremia.

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#### A CASE OF LIPOMA OF THE TONSIL.

*Read at the Annual Meeting of the American Laryngological, Rhinological and Otological Society, Lexington, Ky., April 30th, and May 1st and 2nd, 1903.*

By CLEMENT F. THEISEN, M. D.,

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Malignant neoplasms of the tonsils occur so frequently, that the report of a rare benign growth is of considerable interest. There are certain benign tumors of the tonsil, of such extreme rarity, that each new case should be put on record. The writer has been fortunate enough to observe the following case of lipoma

of the tonsil, which is one of the rarest forms of benign growth in this region:

M. H., a girl, aged eight years, was brought to my clinic in St. Peter's Hospital, December 11, 1902, to be treated for a severe paroxysmal cough that had troubled her for several years. The child is an inmate of the Orphan Asylum at Rensselaer, N. Y., and when she was about three years old she was seen by the writer in the hospital. At that time she also had a troublesome cough which was worse at night. Inspection of the throat disclosed the presence of a tumor about the size of a small marble, which was attached to the center of the right tonsil, by a rather long, thin pedicle. The growth was perfectly round and smooth, and of a yellowish color. An operation was advised, but for some reason which I do not now remember, it was not performed, and the child was not seen again until the present winter.

On examination of the throat the same tumor, slightly larger perhaps, but otherwise unchanged, was seen. The growth was quite compressible, but there was no fluctuation. Its distinctly yellow color was of interest. A careful examination showed that the pedicle came apparently out of a tonsillar crypt, almost in the center of the tonsil. The growth was removed by simply cutting it off as close to the tonsil as possible, and was sent to Dr. George Blumer, of the Bender Laboratory, for examination. The child's cough turned out to be whooping cough, and the paroxysms had been, of course, much increased in severity by the growth which hung down against the base of the tongue, and kept up a constant irritation.

Dr. Blumer's report is as follows:

The specimen was received in alcohol. The specimen consists of a small, distinctly pedunculated tumor, globular in shape. The tumor measures 7mm. in diameter. The pedicle is about 3mm. in length. The outer surface of the tumor is covered by an even gray-white membrane, resembling skin in appearance. On section, the greater portion of the growth is made up of a yellowish tissue, having the appearance of ordinary fat.

*Microscopic appearance.* The outer covering of the tumor consists of a stratified epithelium, such as usually covers the tonsil, but much hypertrophied. Beneath this epithelial layer is a zone of connective tissue, for the most part dense, but infiltrated here and there with cells which, under the high power, are seen to be small round cells. Numerous blood vessels of small size are present in this layer. The greater portion of the tumor is composed of typical areolar tissue. The fat cells composing it are quite uniform in their size, which is normal, and are held together by delicate strands of connective tissue, which are continuous with the connective tissue layer which overlies the fat. Numerous blood vessels are present in the supporting tissue. (*See illustration.*)

*Diagnosis.* Lipoma of the Tonsil.

There are so few cases of true lipoma of the tonsil on record, that a brief review of them will not be out of place. At least I have been only able to find a few cases in a thorough search of

the literature. There is a reference to a case reported by Lambl<sup>a</sup> in 1860, in Ardenne's work<sup>31</sup> on the benign tumors of the tonsil, but it was impossible to get hold of the original article. It is not contained in the Surgeon-General's library. Lambl's case, if authentic, is the first one reported.

The following cases in the order given are the only ones on record:

*First.* The first was reported by Biaggi<sup>1</sup> in 1893. The patient, a man, aged 61 years, had difficulty in deglutition. There was a growth attached to the right tonsil near the anterior pillar. The tumor was removed, and the diagnosis of lipoma confirmed on histological examination.

*Second.* The next was reported by Onodi<sup>2</sup> in 1895. Onodi claims priority in his article for reporting cases of this kind, but it will be seen by the report of Biaggi's case (without taking Lambl's into consideration), that this is an erroneous statement. In Onodi's case there was a small tumor attached to the left tonsil by a pedicle. The patient was a small child (does not give the age). The growth was 1 cm. long, by 1-2 cm. wide, and of a yellowish color. The diagnosis was confirmed microscopically. The growth consisted largely of fat.

*Third.* Lipo-myxofibroma of the tonsil, reported by Haug<sup>3</sup> in 1896. The patient was a woman over 90 years of age. There was a growth on the right tonsil as large as a small hazel nut, not pedunculated. The growth was removed, the operation being followed by a severe hemorrhage. On microscopical examination the main part of the tumor was found to be made up of fat cells, separated by thin connective tissue septa. In the center a myxomatous degeneration had taken place. The author believed that the hemorrhage occurred from the nutrient artery of the growth, which had its origin either directly from the carotid, or from a branch of the ascending pharyngeal.

*Fourth.* Lipoma of the tonsil reported by Avellis<sup>4</sup> in 1898. The patient, a man aged 20 years, had a slowly growing growth on the left tonsil as large as a hazel nut, and attached to it by a thin pedicle. The diagnosis was confirmed by the microscopical examination made by Prof. Weigert, (mass of fat cells).

*Fifth.* Onodi's second case,<sup>5</sup> 1899. A small yellow growth, pedunculated, was attached to the right tonsil of a girl, aged 12 years. The growth on microscopical examination consisted of connective tissue, with fat cells in the center. (Fibro-lipoma).

*Sixth.* Reported by T. A. DeBlois<sup>6</sup>, 1899. The patient, a man aged 40 years, had a tumor about the size of a small peanut attached to the left tonsil, by a pedicle. Microscopically, the growth consisted of a coarse net-work of fibrous tissue with areas of fat globules.

There are now then, including the case that I have had the pleasure of reporting to you, seven cases of true lipoma of the tonsil, in which the growth was *confined to the tonsil* and attached to it, on record.



A few other cases of lipoma of the *pharynx* have been reported, and while they do not strictly belong in the above classification, they are of some interest in this connection. The lipomata in this group of cases were situated mainly on the posterior wall of the pharynx. Cases of this nature have been reported by Bruns (1868), Moritz Schmidt, Barnard Holt,<sup>8</sup> Taylor,<sup>7</sup> Roe,<sup>9</sup> Foucher,<sup>10</sup> and others. In Holt's case, there was a pedunculated lipoma almost filling the pharynx, and extending into the oesophagus. In Taylor's case the lipoma occurred in a girl, aged four years, and was attached to the posterior pharyngeal wall.

Roe's case is of interest on account of the large size of the tumor. It occurred in a woman, aged fifty-five years, and was attached to the posterior pharyngeal wall, practically filling the pharynx. The diagnosis was proved microscopically.

I could find only one reliable case of lipoma occurring in the nose. This case was reported by Gomperz.<sup>11</sup> Some other cases have been reported by English writers and one Spanish writer, (Wilnot, Liston,<sup>15</sup> Duigan,<sup>13</sup> Heath,<sup>14</sup> Squire,<sup>16</sup> Villett<sup>17</sup> and Contreras<sup>12</sup>), but because of the lack of reliable data in these reports, and the absence of exact microscopical examinations, they were not classified as cases of nasal lipoma. In the larynx, lipoma also occurs very infrequently, only nine cases having been reported. (Those of Seiffert,<sup>21</sup> Schrötter,<sup>18</sup> McBride<sup>20</sup> (2), Hohlbeck, Bruns, Jones,<sup>19</sup> Köhler<sup>23</sup> and Farlow.<sup>22</sup>)

We find then, that lipomata of the tonsils are among the rarest of all benign growths of this region. The other rare forms of benign growths of the tonsil, are the true myxomata, the teratomata, the chondromata, the fibro-adenomata and the echinococcus. So far as I could discover, only one case of true echinococcus of the tonsil has been reported, (by Dupuytren<sup>25</sup> in 1842). Cases of true myxoma have been reported by Morrel Mackenzie, and Cozzolino. A case of molluscum pendulum of the tonsil has been reported by Furet,<sup>27</sup> and is one of the only cases on record. The following classification of the benign tumors of the tonsil is suggested:

In the order of rarity: (1) the echinococcus, (perhaps the rarest); (2), the chondroma; (3), the teratoma; (4), lipoma and myxoma; (5), fibro-adenoma; (6), fibro-enchondroma; (7), angioma; (8), cysts; (9), polypi; (10), fibroma, and (11) papilloma. The papilloma and fibroma are the commonest varieties of benign neoplasms of the tonsil, a considerable number having been reported:

ROBERTS' *Archives of Otolaryngology*, New York, XXV., p. 55 1896; MACHELL, *New York Medical Journal*, January 19, 1895; CURLING, *Lancet*, p. 137, 1858; DUCHAUSSOY, *Bulletin de la Societe Anatomie de Paris*, p. 150; 1853; DELAVAN, *Medical Record*, New York, p. 296, 1882; EVE, *Nashville Journal of Medicine and Surgery*, VII., 1854; LEFFERTS, *Transactions of the American Laryngological Association*, p. 62, 1889; CARTAZ, JULIA, 1863; BOURDON, 1872; MASSEI, COZZOLINO; LANGE, *Arbeiten aus der medicinischen klinischen Institut München*, Bd. III., REVIERE, *Annales des Maladie de L'Oreille*, etc., 1880, and others.

A study of the reported cases of lipoma of the tonsil brings out a number of interesting points. When the etiology of lipoma is taken into consideration, it is rather remarkable that the majority of the cases were observed in adults, the tumor in one case being present in the throat of a woman, over ninety years of age.

I do not believe there is much doubt that lipomata are *always* congenital, and the only way perhaps, that the great discrepancy in the ages of the reported cases can be explained, is that the tumor in such cases develops so very slowly, that it does not cause any trouble for a long time. The only way the occurrence of these interesting tumors can be explained is by the embryonal theory. They undoubtedly owe their origin to some congenital aberration, *i. e.*, misplaced fat cells. As the tonsil contains no fat, some misplaced fat cells must be present in embryonic life, and later, owing, perhaps, to lowered powers of resistance of the neighboring cells, the fat cells show a tendency to predominate and form a growth. And we can readily understand, subject as the tonsils are to constant irritation, and inflammatory conditions which recur from time to time, that such a growth might develop quickly or slowly, depending largely upon the susceptibility of the individual to such recurring inflammatory processes.

Clinically the *diagnosis* of a lipoma of the tonsil can often be made by the appearance of the growth. The large amount of fat it contains gives it the characteristic yellow color. Not that this is pathognomonic of lipomata only, but in connection with other diagnostic features, it is an important point. Macroscopically, it may simulate a cyst, but the absence of fluctuation, the characteristic color, and the fact that in many of the cases its fatty nature can be detected clinically, are sufficient to make a positive differential diagnosis between them. From an etiologic standpoint, the lipoma is perhaps more closely allied to the teratoma than to any other benign growth of the tonsil. They are both congenital, and in both there are evidences of misplaced tissue.

The commonest form of teratoma is a polypoid mass covered with hair, and containing bone or cartilage. Only a few have been reported (those of Schmidt<sup>28</sup> and Otto;<sup>29</sup> and Avellis<sup>26</sup> has reported a case of teratoma of the pharyngeal wall in an infant a few hours old).

Great confusion exists in the nomenclature of the benign tumors of the tonsil. Jurasz,<sup>30</sup> in his valuable article on the anomalies of the tonsil, has called attention to the fact that certain small pedunculated lobules are occasionally observed on the tonsil, and represent merely a hyperplasia of the tonsillar tissue itself. He has reported a case in which there was a rudimentary tonsil, with a pedunculated growth of the same histological structure as the tonsil. Such a condition probably occurs in persons who have the "diathèse neoplasique," and must be thought of in considering the diagnosis of unusual benign growth. Such a diathesis, in conjunction with the constant irritation the tonsils are subjected to, undoubtedly accounts for the development of some of the other forms of benign tumors, particularly the polypus, papilloma and fibroma.

In conclusion then, practically the only way in which a positive differential diagnosis of some of the unusual benign tumors of the tonsil can be made, is by the histological examination. The lipoma has a characteristic histological structure, different in many respects from that of any other benign tumor of the tonsil.

The *treatment* of lipoma need hardly be considered. A removal of the growth with the hot or cold loop, or with the scissors, is the only method that need be mentioned. The danger of hemorrhage is slight, the only case in which a severe hemorrhage is mentioned is the one before spoken of, in which the lipoma was removed from the tonsil of a woman over ninety years of age. In this case, too, there was more fibrous tissue than would be present in a benign tumor of this nature in a young person.

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A NOTE ON THE EMBRYONAL GLANDULAR TUMORS  
OF THE KIDNEY.\*

## (EMBRYONAL ADENO-SARCOMA)

*Read at the Annual Meeting of the American Association of Pathologists and Bacteriologists, held at Washington, D. C., May 12, 1903.*

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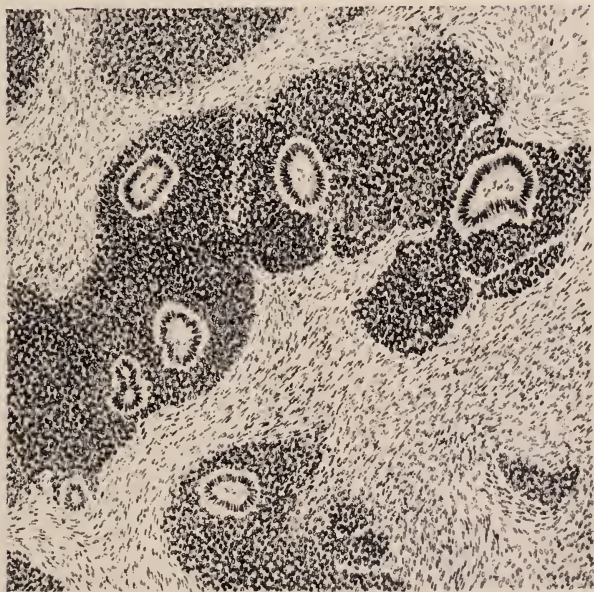
Our conception of the structure and origin of the malignant tumors of the kidney has been greatly simplified by the work originated by Grawitz on the kidney tumors springing from adrenal rests, and by the views of Birch-Hirschfeld regarding the so-called embryonal adeno-sarcomata. Whilst the hypernephromata have received a large amount of attention, both abroad and in this country, the adeno-sarcomata have been relatively neglected, at any rate in America, where Herzog seems to be the only observer who has described them at any length. The credit of pointing out the relative frequency of sarcoma of the kidney in children belongs to Jacobi, who in his classical paper before the Eighth International Congress forcibly demonstrated this fact. The importance of the embryonal adeno-sarcomata can be readily understood when it is stated that of Walker's collection of sarcomata in children, published in 1897, over twenty-eight per cent. of those cases in which a microscopical diagnosis was made are described as adeno-sarcomata or rhabdomyosarcomata, which latter tumors, as will be later shown, also belong to this group.

The following case is presented as illustrating this form of tumor; we are indebted to Dr. A. Vander Veer for the history, the case having occurred in the Albany Hospital in his service:

E. M., four and one-half years of age. The family history was negative. The patient had always been well up to the time of the present illness, except for constipation. Six months previous to admission to the hospital he had passed a small amount of blood in the urine. A lump in the abdomen was first noticed a few days before he was brought for treatment, and seemed to be growing rapidly. No marked symptoms were apparent, the child being up and about. Physical examination showed a

\* Most of the important literature bearing on this subject may be found in *Beiträge zur pathologischen Anatomie von Ziegler*, Bd. 24, p. 396, and in *Lubarsch and Ostertags Ergebnisse der allgemeinen Pathologie*, Sechster Jahrgang, 1899, page 781.

To Illustrate Dr. Blumer's article on "Adeno-Sarcoma of the Kidney."



KMM.

SHOWING THE CONNECTIVE TISSUE STROMA IN WHICH THE GLANDULAR AREAS  
SURROUNDED BY SARCOMA ARE EMBEDDED.



tumor on the left side of the abdomen the size of a closed fist. It seemed to fluctuate, was tense, and not painful. The tumor was removed under ether, and the child at the time made a good recovery, but died three months later with definite recurrence of the new growth. An autopsy was not obtained.

The following is the description of the tumor:—

*Gross appearances:* The specimen consists of a kidney removed for new growth. Two distinct portions are to be made out, one in which kidney substance is still distinctly present, the other entirely made up of new growth. The new growth is extremely friable, and almost completely broken down, so that it is presented for examination as a mass of debris and tumor particles just about filling a litre measure. The tumor particles vary in diameter from one to ten centimeters; they are irregular in form, and the outer surface of many of them has a papillomatous appearance. On section they are seen to consist of a very cellular, homogeneous looking, grayish-white new growth. Portions of the growth are attached to the still recognizable kidney substance and project into the pelvis of the kidney. The kidney substance present seems to correspond to about one-half of the organ. It is pale and compressed, and though not separated from the new growth by a definite capsule there is no involvement of the kidney by the growth as far as can be judged from the naked eye appearances. The renal vessels show no change, nor does the upper end of the ureter.

*Microscopic:* The tissue noted as kidney substance in the gross description shows no invasion by new growth, except at one point where the neoplasm has invaded a large vein. The kidney, however, shows the lesions of an ascending nephritis in the form of polynuclears in and between many of the tubules, associated with increase of the connective tissue of the organ. In places the tubules are considerably dilated, apparently as a result of the shutting off of their lower ends by the inflammatory process.

The tumor is composed of three kinds of tissue (1) a connective tissue stroma, (2) glandular structures, (3) sarcomatous tissue. The stroma, which varies in amount in different portions of the tumor, is mainly made up of rather cellular connective tissue. The cells are spindle-shaped, and separated from one another by a fine fibrillated intercellular substance. There are a few bands of a denser, less cellular connective tissue interspersed through the tumor. Numerous blood spaces and several quite large thin walled vessels (veins) are present in the stroma. In a few sharply localized areas elastic fibres are present in the connective tissue unrelated to any blood vessels. The glandular structures and the sarcomatous tissue are closely associated as a rule. In places the glandular elements appear as cross sections of tubes formed by epithelial cells, which are separated from the stroma by a circular zone of connective tissue containing very few cells. In other places sarcomatous tissue alone occurs as masses of cells lying in the stroma. Almost everywhere throughout the tumor the glandular structures are surrounded by sarcomatous tissue as by a sheath. The glands are cut in places in transverse section, in places longitudinally; in the former instance they form almost circular



spaces, in the latter they appear as branched tubes. The cells lining the glands generally form two or three layers; they are columnar in shape, have a vesicular nucleus of an elongated oval shape, and show occasional mitotic figures. In many instances these cells have no supporting membrane, and are merely separated from the surrounding sarcomatous tissue by a space of uniform width, in which a few pink stained granules representing degenerated cell protoplasm are apparent. In some places the cells lining the gland-spaces are surrounded by a very delicate connective tissue basement membrane, which in places has undergone hyaline degeneration. In many areas where at first sight only sarcomatous tissue is present, a closer examination shows attempts at gland formation, and the fact that such partly formed glands communicate with the pelvic surface of the tumor, or with other gland spaces, is shown by an infection similar to that in the kidney which has traveled up the gland tubules and infected them, and in places the surrounding sarcomatous tissue. The sarcomatous tissue is made up of rounded or oval cells having a vesicular nucleus with well marked chromatin network and a moderate amount of finely granular protoplasm. In places the nuclei of the cells look very much like those of the cells lining the gland spaces, but in other spaces the nuclei of the tumor cells are distinctly smaller. In all parts of the tumor the nuclei of the sarcomatous tissue differ in shape from those of the glandular tissue, the latter being much more elongated. The sarcomatous tissue is demarcated very sharply from the surrounding stroma, and no transformation of stroma into sarcomatous tissue can be made out. Occasionally thin walled vessels may be seen in the sarcomatous tissue. Invasion of vessels by the sarcomatous growth is to be demonstrated in several places. No smooth muscle, striated muscle, or cartilage was found in sections from several parts of the tumor. The type of cell found in the glandular structures resembled very closely the cells found in the glandular portions of the Wolffian body, but did not resemble so closely the cells of the tubules of foetal kidney.

Our present conception of the embryonal glandular tumors of the kidney originated with Birch-Hirschfeld, in 1894, and was based on the observation of a case reported by this writer and Döderlein. In 1898, Birch-Hirschfeld again published his views on the subject, adding the results of his further experience with these tumors. There is no doubt that this class of tumor was described long before its nature was recognized, and that all of the cases described as adeno-sarcoma of the kidney belong to it. It seems likely, too, that most, if not all, of the tumors occurring in children and described as carcinomata should be placed in this class, and probably also some described as mixed celled sarcomata. The relation between this class of tumors, and the tumors of the kidney containing striated muscle, has been pointed out by Birch-Hirschfeld, and a perusal of the descriptions of rhabdomyomata of the kidney shows that many of these tumors con-

tained gland-like tissue, the origin of which was variously interpreted, and the significance of which was usually overlooked. An analysis of the literature on tumors of the kidney indicates that the embryonal glandular tumors constitute a class just as sharply defined as the hypernephromata. Almost all of the cases occur in children within the first five years of life, though Hoisholt has described a case at eighteen, and Muus one at thirty-four. They differ in this from the hypernephromata which seldom appear until after the age of thirty, and the true carcinomata which are rare before forty. The tumors show a marked tendency to rapid growth, and, as a rule, metastasize relatively late, the metastases nearly always appearing in the lungs or liver, and practically never in the regional lymph nodes. The gross appearances show that the kidney substance proper is generally quite sharply separated from the tumor, which often fits over the relatively small kidney like a cap.

Judging from the descriptions in the literature these tumors may be roughly divided, as far as microscopic structure is concerned, into two classes—those in which the tumor is made up of a connective tissue stroma, containing glandular elements with, in some cases, smooth muscle tissue; and those in which besides these elements striped muscle is present, at times in association with cartilage, fat and myxomatous tissue. Apparently no hard and fast line can be drawn between these two classes as borderline cases occur. The tumors from which striated muscle is absent consist of a mixture of glandular elements and archiblastic structures. The archiblastic structures are in the form of connective tissue or smooth muscle, usually of an embryonic rather than an adult type, and the gland structures are distributed through this stroma. The proportion of stroma to glandular tissues varies very considerably in different tumors, and even in different parts of the same tumor. The gland-like structures appear in places as cross sections of glands lined by one or more strata of epithelial cells, and in places as oblique or longitudinal sections of gland-like spaces showing branching and ending in rounded extremities. The malignant nature of the tumors is indicated by the sarcomatous character of portions of the stroma in most of these growths. The sarcomatous tissue appears at times as round, at times as spindle-celled masses, and is usually irregular in its distribution. In many of these tumors, portions of the growth may present the appearance of adenoma, whilst

other portions have all the appearances of sarcoma. Occasionally the sarcomatous infiltration has a very definite relation to the glandular structures, being arranged about the gland spaces like a sheath; this is true of one case reported by Merkel and of the author's case. Merkel suggests the name adeno-sarcoma pericanaliculare for this type of growth. It would seem from the published descriptions that in the cases where striated muscle is present the glandular elements are often relatively small in amount. The striated muscle is usually embryonic in type and often occurs in bundles or masses. Invasion of the kidney by the growth is generally absent, or slight in extent, and when metastases occur they are usually intimately associated with ingrowths of the tumor into the blood vessels, and consist of secondary growths arising from the sarcomatous portions of the tumor. Only one case is on record where the metastases of such a tumor contained striated muscle, and such an occurrence seems to be entirely exceptional. In some instances where the growth involved the right kidney enormous tumor thrombi reaching into the vena cava, and even into the right auricle, have been described.

Not only the peculiar structure, but also the origin of these tumors is of great interest. The earlier observers, and especially those who described rhabdomyomata in which the glandular element was not markedly developed, inclined to the belief that the glandular structures were remains of kidney tubules which had become included in the growth. Most writers who have studied such tumors since the time of Birch-Hirschfeld's first article entirely disregard such an idea. Birch-Hirschfeld himself states that the gland spaces resemble neither fully developed nor embryonic renal tubules, and most observers agree with him in this. Muus, however, and one or two others who have described kidney tumors of this type, entertain the belief that the growths closely resemble embryonic kidney tissue. The majority of the writers on the subject side with Eberth in the idea that the growths originate from rests of the Wolffian body which have become fused with the kidney during its development. This theory, while it accounts for the simple types of adeno-sarcoma made up of a connective tissue or smooth muscle stroma and glandular elements, will not explain those tumors which contain striped muscle, or cartilaginous tissue, which structures develop from centers different to those giving rise to the Wolffian body. Some writers have endeavored, it is true, to explain the pres-



ence of striated muscle as due to metaplasia from smooth muscle cells, but, with our present ideas regarding metaplasia, such a view can hardly be accepted. To explain, therefore, the origin of tumors containing either striated muscle or cartilage, or both of these elements, as well as the stroma and gland tissue, we must resort to one of two hypotheses. One explanation would be that displacement of tissue at a very early stage of development had led to the inclusion in the neighborhood of the kidney of embryonal tissue so undifferentiated that it was capable of developing all of the elements found in the more complex mixed tumors of the kidney. The other theory, which has been brought forward by Wilms, makes the more complex tumors depend on the displacement not only of the "mittelplatte" from which the tubular portions of the Wolffian body arise, but also of portions of the myotome and sclerotome. According to this explanation we might expect to find three groups of embryonal adeno-sarcomata; (1) a group due to misplaced Wolffian tissue alone made up of a stroma of connective tissue or smooth muscle containing gland-like spaces, (2) a group containing the same elements as the first plus striated muscle, and due to displacement of the "mittelplatte" and portions of the myotome, and (3) a group composed of tumors containing cartilage, as well as the elements found in groups one and two, and representing an origin from misplaced "mittelplatte," myotome and sclerotome. The situation of these different centers is such that the possibility of combinations of this sort cannot be denied, and the fact that to a large extent we do find such groups of tumors favors this view of their development rather than the idea of their origin from a very young undifferentiated tissue.

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## ACID AUTO-INTOXICATION APART FROM DIABETES MELLITUS.

### REPORT OF THREE CASES.

*Read before the Medical Society of the County of Albany, March 18, 1903.*

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It is impossible to fully cover in an article of the scope of the present one, the subject of the so-called acid-intoxications, so that I shall briefly attempt to sketch here a little of the large mass of information accumulated and accumulating concerning this variety of disease.



There are two possible sources within the body of the fatty acids found in the blood and urine; first, disordered metabolism of the hydrocarbon (fat) molecules associated with lessened oxidation and thus imperfect combustion of fatty end-products; second, bacterial putrefaction of proteids in the stomach and intestines.

It is probable, according to the weight of experimental evidence, that the bulk of the acids of the fatty series occurring within the body and excreted in the urine are normally derived from the destruction of the body fat, though it is possible for them to be derived from the putrefaction of proteids in the gastrointestinal canal.

The most important simple acids derived in this manner are formic, acetic, propionic, butyric, acetyl-acetic, and the oxy-acid and  $\beta$ -oxy-butyric acids. Formic acetic, propionic and butyric acids, as well as fermentation lactic acid, are when absorbed converted rapidly to  $\text{CO}_2$  and  $\text{H}_2\text{O}$  in inverse proportion to the order in which they are given.

Acetyl-acetic and  $\beta$ -oxy-butyric acid, however, retain their identity within the blood-stream and in the tissues or are broken up into acetone and carbon-dioxide. Araki has found that upon feeding  $\beta$ -oxy-butyric acid to animals it is oxidized, and that acetyl-acetic acid and acetone may thereupon be detected in the urine. Acetone in large doses has no effect on animals or men, as has been shown by Salomon and Brieger. The same observers have found also that experimental administration of acetyl-acetic acid causes the appearance in the urine of acetone, but it never occurs in the urine unchanged. Very large doses were without noticeable effect, neither dyspnoea nor somnolence being produced; but after the dose had been continued for some days there were loss of appetite, and the breath acquired a peculiar aromatic smell. Steinberg was able by the injection of  $\beta$ -amido-butyric acid into the lower animals to produce a coma with air-hunger, similar to diabetic coma, and also like it accompanied by the appearance of acetone and acetyl-acetic acid in the urine. He believes that the  $\beta$ -oxy-butyric acid is merely an oxidation derivative of the foregoing amido-acid. His experiments were verified by Grube, but Magnus-Levy, although crediting the possibility of such a derivation, claims that the amount of  $\beta$ -oxy-butyric acid found by Steinberg is much too high, and is disinclined to admit that this is the true source of the  $\beta$ -oxy-butyric

acid. It seems, moreover, that this in common with all the other amido-acids is most probably burned to urea in the body.

It has been found that in diabetics derived of carbo-hydrates as well as in normal men who fast, and thereby break down much fat, that the urinary-content of acetone as well as the respiratory-content increases very greatly (Van Geelmuyden, Schwarz, Magnus-Levy, Schumann-Leclercq). Hence Magnus-Levy contends for the synthetic production of  $\beta$ -oxy-butyric acid within the body from the end-products of fat-destruction.

Associated with the so-called acid intoxications it has been found that the ammonia content of the blood and urine increases in equal ratio with the increased amount of acids (Araki). It is not improbable that because of the impaired alkalinity of the blood and the resultant reduction in its  $\text{CO}_2$  carrying power the antecedents of urea, amido-bodies derived from proteid metabolism are not fully hydrolysed into urea and circulate as the carbamate and carbonate of ammonia (Drechsel, Drechsel and Abel). This increase in the amount of endovascular ammonia must in itself be taken into account as regards the nervous symptoms of the acid intoxication, for it has a pathogenic effect of its own as the experiments of Hahn, Pawlow, Massen, Nencki and Zaleski show; again it is necessary to call to mind that in the gastro-intestinal cases, or those previously so-called, that the latest experimental studies in intestinal fat-digestion have shown that all fats are first split up into their corresponding fatty acid and glycerin and after passing the intestinal mucosa are again synthesized (Pflüger). It is not impossible that, owing to imperfect synthesis in the lacteal capillaries, a certain amount of the fatty acids and their derivatives especially  $\beta$ -oxy-butyric acid and acetyl-acetic acid may fail to combine with glycerin to form fat and thus be absorbed into the circulation unchanged.

The majority of the cases, other than diabetic, of acid-intoxication have been found to occur in patients subject to habitual constipation and gastro-intestinal dyscrasia. Again in cases of dilatation of the stomach or ptosis with impaired motility and diminished HCl, it has been found that the bacteria readily split up the fats and casein into fatty acids.

In summarizing, it is possible to speak only of a few of the cases of acid-intoxication found in the literature. It is well known that Küssmaul was the first to describe in 1874 the symptom-complex frequently called by his name, or diabetic coma. Küss-

maul describes this condition as occurring only in diabetes, so that to Senator we owe the knowledge that it has an existence entirely apart from this disease. He recorded seven cases; two of chronic cystitis, two of gastric cancer, and three of pernicious anæmia, which terminated by coma. In none of these was sugar or acetyl-acetic acid present in the urine. Riess described eight cases in anæmia; five in anæmia with renal disease, and four in gastric and hepatic cancer. Litten speaks of a case occurring in a boy convalescing from scarlatina with albuminuria, which subsequently disappeared. It is not improbable that many of the above were other than acid-intoxications.

v. Jaksch reported a case of carcinoma gastritis in which death occurred after a typical symptom-complex, accompanied by the presence of acetone and acetyl-acetic acid in the urine. This seems to be the first case reported of true acid-intoxication apart from diabetes. Since then the literature has been rapidly accumulating and has become very voluminous.

The first who almost simultaneously, in 1884, found  $\beta$ -oxybutyric acid in the blood in this symptom-complex occurring in diabetics, were Minkowski, Külz and Stadelmann. They were also the first to lay stress upon the toxic influence of large quantities of acids when introduced into or produced within the body. Walter later found, in experimental work upon rabbits, that the introduction of large quantities of dilute hydrochloric or phosphoric acid was followed by dyspnœa, collapse and death. If, however, shortly after the administration of the acid he injected subcutaneously a solution of sodium carbonate the animals remained well. Binz found, also, that sodium butyrate produced coma in cats.

Recently Lorenz has reported a series of five cases of simple acid-intoxication; two in children and three in adults, all of which recovered. The symptoms in all were nervous depression with excitability, headache, stupor and partial coma. Albumin and casts, acetone and acetyl-acetic acid were found in the urine. Litten reports two cases with precedent gastro-intestinal symptoms, indigestion, constipation, coma, diaceturia, acetonuria and death. In all of these cases cyanosis or livor was a prominent symptom.

Marfan reports a series of cases of uncontrollable vomiting in children from one to ten years old, without fever; but attended by severe prostrative stupor, and the presence of acetone in the



urine. He thinks that this is allied to cyclic vomiting. It is probable that these cases are true cyclic vomiting, and moreover that all the so-called conditions of cyclic vomiting, primary periodic vomiting, idiopathic periodic vomiting, etc., will be found to be acid auto-intoxication in children.

Edsall reports a case in a man of sixty-five of coma of ten hours duration with slow deep respiration, low temperature (95 F. in axilla), cyanosis, acetone-odor to breath; the urine showed the presence of acetone and diacetic acid. This man was afflicted with habitual constipation and occasional obscure gastro-intestinal disorder. The treatment was solely stimulation with strychnine and aromatic spirits of ammonia together with the intravenous injection of large amounts of a 3% solution of sodium carbonate; nine hours after the first injection diacetic acid had disappeared from the urine. Recovery followed.

Three cases occurring in my own practice are reported below.

*Case I.* Miss S. L., thirty-three years old; born in Germany; single; a servant by occupation. Family history: entirely negative. Previous personal history: has been in poor health for the past eight years. Habitually constipated. On November 28th, 1902, in the morning, she was seized with chilly feelings, nausea and vomiting, headache and prostration, increasing to stupor, voided urine once while asleep. When seen by me on the afternoon of the same day, patient was soporose but could be roused. Aromatic acetone-like odor filled entire room in which patient was lying. Tongue heavily coated, moist. Face, lips, and finger nails slightly cyanotic. The respirations were deep, sighing, fourteen to the minute. Pulse 120. Temperature 100F. Heart and lungs negative. Ptosis of the stomach and right kidney. Colon loaded with feces. Urine, pale, s. g. 1.025, strongly acid reaction, no albumen, no casts, no sugar; no acetone but marked acetyl-acetic acid reaction. I ordered her to the Albany hospital; she was admitted Nov. 28th, 1902, at six o'clock P. M. Treatment, no nourishment for twenty-four hours. A high enema of glycerin and epsom salt resulted in a large fecal dejection. A high enema of three pints of five per cent. solution of sodium bicarbonate repeated in four hours. Diacetic acid had disappeared from urine by eight P. M. November 29, 1902. Slow convalescence. Secondary anæmia with leukopenia November 30, 1902. Stools and urine normal. December 4th, developed a marked left sided neuralgia of the fifth, sixth and seventh intercostal nerves. December 15th, 1902, entirely recovered.

*Case II.* A. C., four years old; born in the United States; complains of vomiting for past three days. Family history: negative, save that a sister died of convulsions at the age of ten months. Past history: has had an attack lasting seven to ten days similar in all respects to present one, every month for past four months, otherwise well. Bowels regular. On the evening of January 24th, 1903, when I first saw the patient, I



was told that she had vomited from six to twelve times daily for the past three days, rejecting everything given by the mouth. Thirst was incessant. For past eight hours it had become more and more difficult to rouse child from stupor, which was constant save during frequent attacks of vomiting. Physical examination showed a well developed, plump, well nourished child. Eyes partly closed. Sclera visible. Marked pallor of face, some cyanosis of lips, deep respiration of sixteen per minute. Temperature 96.8F. per rectum. Pulse 136, weak, small and of low tension. Breath had marked aromatic odor. Heart, lungs and abdomen negative. Urine pale, s. g. 1.026, very acid reaction, neither albumen, sugar, nor casts present. Acetone and acetyl-acetic acid present in large quantities. Treatment consisted of absolute restriction of all nourishment for twenty-four hours. Soap-suds enema followed by high colonic enema of one-half pint ten per cent. solution of sodium bicarbonate. Repeated every two hours for eight hours. No further vomiting. After the second injection she became wide awake and endeavored to sit up. The diacetic acid and acetone had disappeared from the urine by the following morning and did not reappear. Steady and rapid convalescence. Secondary anæmia with normal leucocyte count (reds 3,500,000, whites 9,000, hæmoglobin sixty per cent., color index ninety-five).

*Case III.* McN., three years old; born in the United States. Family history: negative. Past history: negative save for measles, one year since, and slight degree of constipation. Two days ago complained of headache, pain in the pit of stomach, vomited and was sleepy. Very constipated, no movement for past three days. Child has become more and more stuporose so that upon the occasion of my first visit on the evening of February 8th, 1903, it was impossible to rouse her save by causing marked pain either by pinching or pricking with a pin, and even then the child would merely become uneasy, withdraw the limb, cry out, and again sink into stupor. The heart, lungs and abdomen were negative save for a loaded colon. There was marked diffuse redness of inside of thighs and vulva, and diffuse redness of back and sides of abdomen. Breath markedly acetone-like. Temperature, rectal 97F. Pulse ninety-six per minute, of fair volume, and low tension. Respirations fourteen, very deep and sighing. Urine pale, s. g. 1.026, very acid reaction, contains a trace of albumen, diacetic acid, and acetone; no sugar, a few hyaline casts. Treatment: high enema of glycerin and magnesia sulphate. High colonic injection one-half pint ten per cent. solution  $\text{Na}_2\text{CO}_3$  repeated every two hours for eight hours, and one pint of two per cent. solution of  $\text{Na}_2\text{CO}_3$  in deci-normal saline solution injected into the subclavicular areolar tissue. Became conscious and wished to sit up one hour after last rectal injection. Diacetic acid, acetone, albumen and casts had disappeared by the next morning. Steady, rapid convalescence.

Two of the cases given above show quite clearly the main symptoms of the coma described by Küssmaul, namely, air-hunger, epigastric pain, cyanosis, lowered temperature, coma, acetonuria and diaceturia. The other case is one of typical primary periodic or cyclic vomiting. The albumen and casts which

were present in the urine of the third case were probably due to the instant effect of the large amount of acids excreted, to which cause also may be ascribed the redness of thighs and vulva. The neuralgia which developed in the first case is interesting in view of the frequency with which the same symptom occurs in diabetes.

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## Editorial

In Doctor Norris's famous narrative of the frenzy of Mr. John Dennis, the patient, being questioned as to the occasion of the swelling of his legs, replies that it came "by criticism;" to which the learned doctor seeming to demur, as to a distemper he had never read of, Dennis (who appears not to have been mad upon all subjects) rejoins with some warmth, that it was no distemper, but a noble art! that he had sat fourteen hours a day at it: and that the other was a pretty doctor not to know that there was a communication between the brain and the legs.

CHARLES LAMB.

*On the Melancholy of Tailors.*

**The Albany  
Guild for the  
Care of the  
Sick Poor  
Special  
Obstetrical  
Department**

Beginning with September 1, 1903, the Guild will assume the entire management and financial responsibility of this department. In order to increase its usefulness and make it of permanent value, it is hoped that physicians who appreciate the importance of practical obstetrical experience to medical students, will be willing to co-operate with the Guild by not accepting charity obstetrical cases, and by advising such patients to apply to the Guild for special professional service and the care of a graduate nurse. This co-operation is asked for with less hesitation, because it is realized that these cases are undesirable and unprofitable to physicians. The names of the obstetricians appointed by the Guild, and the recognized ability of the Guild nurses, are guarantees for skill and efficiency as heretofore. It is earnestly desired that physicians should give most careful thought and attention to this department of Guild work, which is undertaken for the furtherance of the practical proficiency of senior students along obstetrical lines before graduation.

**The Need of  
an Endowment  
Fund**

At the annual meeting of the Alumni of the Albany Medical College, it has generally happened that some member of the faculty has either officially or unofficially acquainted the Alumni with the general condition of the affairs of their Alma Mater. Very often, as in Dr. Hun's address of welcome of this year, the future needs of the College have also been spoken of. The problem which confronts the

Albany Medical College to-day, is one which confronts all the smaller unendowed institutions in this country, and is directly due to the changing methods of teaching, or more properly speaking, to the gradual introduction into this country of European methods of teaching.

In the more advanced medical institutions of this country at the present time the four years of medical study are practically divided into two periods of two years; the first period is passed in the study of the basal subjects, anatomy, physiology and physiological chemistry, pathology and bacteriology, and pharmacology, and the second period is devoted to learning how to apply these more or less abstract sciences to the study of disease. For the first two years of study laboratories are necessary, and for the second period a well equipped hospital with a good dispensary. It is a curious fact that a people so essentially practical as the American people should have clung for so many years to the didactic method of teaching a subject like medicine in the practice of which actual manual dexterity plays no mean part. After all, this was in all probability not due to a lack of appreciation of the necessity of practical training, but rather to the lack of funds wherewith to carry out such methods of instruction. The fact that the better schools are now committed to practical laboratory and hospital methods of teaching must be faced, and it seems probable that unless the smaller schools can obtain the means of carrying out practical teaching they must ultimately, and very properly, succumb.

The problem which now faces the Albany Medical College therefore is that of providing laboratories and the means to support them, for, as is well-known, modern scientific laboratories cannot be supported by the fees of their students. We believe that this is an appropriate time to again remind the Alumni that it is in their power to materially aid the College in this matter, and we would impress upon them the fact, often but little appreciated, that it is not the initial expense of building which constitutes the financial burden in a laboratory, but the remuneration of the Staff, and the running expenses. What is needed therefore, and imperatively needed, in connection with a laboratory building is an endowment fund sufficient to provide salaries for teachers and their assistants, and means for supporting the laboratory.



We cannot pretend that this endowment can be a very small one, indeed it should produce at least \$5,000 per year for each department at a minimum estimate. We would point out, however, that much of this endowment could be donated in relatively small sums, in the form of endowments of teaching fellowships or of professorships. Donors to institutions as a rule require that their names shall be perpetuated in some way, and this can be done just as well in connection with professorships or fellowships as it can in connection with buildings. While the Albany Medical College is supplied with an administration building, a laboratory of pathology and bacteriology, and good hospital facilities, she needs badly laboratories of physiology, physiological chemistry, and anatomy, with men and means to carry them on.

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### In Memoriam

WILLIAM WINTHROP BETTS, M. D.

William Winthrop Betts, M. D., died at the Christian Hospital in Los Angeles, California, June 15, 1903, after suffering for years with Bright's disease. Dr. Betts was born in Hillsdale, Columbia county, N. Y., and was forty-one years of age. He was graduated at the Albany Medical College with the class of 1883, and practiced medicine for a time in Minneapolis, and later in Salt Lake City. He moved to Los Angeles in January, 1900, on account of his failing health, going the greater part of the way with a team. On this journey he followed the line of the proposed Salt Lake railroad, and he later wrote a description of the region for *The Times Magazine*. Soon after arriving he went to Catalina, where he remained for about a year. His health improved and he returned and practised until attacked by his last illness. Dr. Betts was prominent as a climatologist. He had made a special study of the climate of the southwest, and a paper entitled "A Comparative Climatic Study of the Arid and Semi-Tropic Southwest and its Relation to Tuberculosis," presented by him before the Rocky Mountain Inter-State Medical Association in Denver, in September, 1901, attracted attention and was widely circulated in pamphlet form.

**Public Health**

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF PUBLIC HEALTH — CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JUNE, 1903

*Deaths*

	1901	1902	1903
Consumption .....	25	14	12
Typhoid Fever .....	3	2	0
Measles .....	0	2	2
Scarlet Fever .....	1	0	0
Whooping-cough .....	0	0	2
Diphtheria and Croup .....	0	0	1
Grippe .....	0	0	2
Cancer .....	14	6	9
Pneumonia .....	1	3	4
Broncho-pneumonia .....	3	4	3
Apoplexy .....	12	8	5
Bright's Disease .....	11	5	10
Accidents and Violence .....	9	6	7
Seventy years and over .....	19	19	15
One year and under .....	14	13	15

*Deaths in Institutions*

	1901	1902	1903
Albany City Hospital .....	15	10	11
Albany Orphan Asylum .....	1	0	0
County House .....	2	5	4
Homœopathic Hospital .....	4	3	1
Hospital for Incurables .....	2	1	2
Penitentiary .....	2	0	0
Public Places .....	1	0	1
St. Margaret's House .....	4	0	2
St. Peter's Hospital .....	3	0	5
St. Francis de Sales Orphan Asylum .....	0	0	3
Total number of deaths .....	148	102	119
Death rate for June .....	15.87	11.16	13.03

Death rate for June, 1903, less non-residents dying in institutions is 11.71.

Marriages .....	91
Births, at term .....	118
Premature .....	4
Still .....	13

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Total..... 135

An extremely low death rate for June is to be noticed. The death rate of 13.03 for all residents and non-residents and 11.71 for residential death rate shows that the city continues to be in a most healthful condition. There were twelve deaths from consumption as against fourteen a year ago and twenty-five in the year 1901. There were no deaths from typhoid fever and one death from diphtheria and croup. The birth return of 135 births as against 119 deaths is an extremely satisfactory one.

#### WORK OF HEALTH PHYSICIANS

Total number of calls made.....	210
Total number of assignments.....	61

#### INSPECTIONS

During the month there were 107 markets inspected. Forty pounds of veal and ten pounds of other meat was condemned. Two meat peddlers were inspected, three fish markets were inspected, twelve fish peddlers, two slaughter houses, three cow stables, two milk rooms, thirty-nine milk peddlers. Two milk samples were taken and tested and four tests were made and found above the standard.

During the month forty-seven complaints were made to the department of nuisances of which six were of privies, eight of closets, six of drains, four of plumbing, one of wells and cisterns, five of water, five of filthy yards, two of filthy premises, three of chickens and six miscellaneous complaints.

There were fifty-eight inspections made, of which thirty-nine were sanitary inspections and nineteen plumbing inspections, twenty-four sanitary reinspections and twenty-one plumbing reinspections. Thirteen complaints were found to be without cause, and twenty-six were found to be abated on reinspection. Twenty-seven notices were served to abate nuisances during the month.

In the Bureau of Plumbing, Drainage and Ventilation, there were 189 inspections made, of which 138 were of old buildings and fifty-one of new buildings. Fifty-eight iron drains were inspected, thirty-five connections with street sewer, thirty-four tile drains, three urinals, three latrines, thirty-three cesspools, fifty-five wash basins, sixty-seven sinks, fifty-four bath tubs, thirty-eight wash trays, five trap hoppers in yard, eighty-five tank closets, three butlers' pantry sinks and two slop hoppers. 114 permits were issued of which eighty-eight were for plumbing and twenty-six for building. Eighteen plans were submitted to the department for approval, of which eight were of old buildings and ten of new buildings. Nineteen houses were tested on complaint, of which tests, ten were by the blue, red, test, and nine by the peppermint test. Twenty-one water tests were made.

BUREAU OF CONTAGIOUS DISEASE

*Cases Reported*

	1901	1902	1903
Typhoid fever .....	2	4	2
Scarlet fever .....	8	14	5
Diphtheria and croup.....	27	22	11
Chickenpox .....	3	38	4
Measles .....	58	25	118
Consumption .....	1		1
Number of days quarantine for diphtheria:			
Longest..... 37    Shortest..... 6    Average..... 20+			
Number of days quarantine for scarlet fever:			
Longest..... 62    Shortest..... 19    Average..... 33 1/6			
Fumigations:			
Houses..... 26      Rooms..... 68			

The diminution in the reports of cases of typhoid fever, scarlet fever, diphtheria and chickenpox is to be noticed. There is comparatively little of any of these diseases now in the city. A large increase in the number of cases of measles is noticed but it is expected that with the close of public schools the number of cases of this disease will rapidly decline.

BENDER LABORATORY REPORT

Cultures for diphtheria:

Initial positive	Initial negative	Release positive	Release negative
8	15	9	17
	Failed.....	6	
Total.....			55

**Medical News**

Edited by Eugene E. Hinman, M. D.

ALUMNI ASSOCIATION PROCEEDINGS FOR 1903.—The proceedings of the thirtieth annual meeting of the Alumni Association of the Albany Medical College has just been distributed to the Alumni. This contains much of interest to our graduates, especially the information concerning the whereabouts of the members of a number of classes. If anyone notices errors or omissions in the class records, or has any information not recorded, the Historian would be greatly obliged if he will communicate with him, as an effort is now being made to make our class records as correct and complete as possible.

ALBANY MEDICAL COLLEGE ANNOUNCEMENT FOR 1903-'04.—The Announcement for the coming session of the college has been published and if any of the graduates of the college wish a copy an application to Dr. Willis G. Tucker, Registrar, will secure it. The teaching force has received some de-



sirable additions and the work as planned for the coming year will be still more valuable and complete than ever before. The regular lectures will be resumed September 22nd and Commencement will be held on Tuesday, May 3, 1904.

**THE ALBANY COLLEGE OF PHARMACY.**—The Albany College of Pharmacy has sent forth its catalogue for 1903-04, in which it announced that the introductory lecture will be delivered on Monday, October 5th and Commencement will be held on Tuesday, March 29, 1904.

**CHANGES AT THE BENDER HYGIENIC LABORATORY.**—Dr. George Blumer having resigned his connection with the Medical College and the Bender Laboratory, to engage in practice, his successor will be Dr. R. M. Pearce, of Philadelphia, Pa., who has been appointed adjunct professor of pathology and bacteriology and director of the laboratory. Dr. Pearce will assume his duties about the first of September. Dr. Arthur T. Laird and Dr. Harry W. Carey, assistants at the Bender Laboratory, have also resigned as such, and it is understood that their positions will be filled by the appointment of Dr. E. McD. Stanton, of New York, and Dr. Charles K. Winne, of Mt. Wilson, Md. Dr. Blumer will engage in practice in San Francisco, Cal., his old home, and Drs. Laird and Carey will remain on the teaching staff of the college, although neither will have any official connection with the laboratory.

**NEW HOSPITAL FOR CONTAGIOUS DISEASES.**—The contracts for the construction of the hospital for contagious diseases in this city have been awarded and work will begin at once. All patients will be under the care and supervision of the staff of the Albany Hospital, except smallpox patients, for whom a separate building is to be erected at some distance from the Albany Hospital which will be complete in all details for the proper care of smallpox cases.

**THE ALBANY GUILD FOR THE CARE OF THE SICK POOR.**—STATISTICS FOR JUNE, 1903. Number of new cases, 52. *Classification of cases:* Dispensary patients receiving home treatment, 1; district cases reported by health physicians, 7; charity cases reported by other physicians, 23; patients of limited means, 22; old cases still under treatment, 83. *Classification of diseases (new cases):* Medical, 16; surgical, 5; gynæcological, 3; obstetrical, 14 mothers, 13 infants; dental, 1. Six contagious diseases in medical list; transferred to hospitals, 2; deaths, 5.

*Special Obstetrical Department:* Assistant obstetrician in charge of all cases for this month. Medical students in attendance, 2; Guild nurses, 3; cases, 1. Number of visits by the obstetrician, 1; by medical students, 9; by Guild nurses, 19; total number of visits for this department, 29.

*Visits of Guild Nurses (all departments):* Number of visits with nursing treatment, 811; for professional supervision of convalescents, 174; total for the month, 985. Cases were reported to the Guild by one health physician, by the city physician, by twenty other physicians and by one dentist.

**HOSPITAL FOR INCURABLES.**—The Albany Hospital for Incurables has lost one of its best friends in the death of the matron, Mrs. Eleanor Spensley, who died June 23, 1903. Mrs. Spensley spent the best years of her life in promoting the noble work in which she has been engaged since 1878. How well she succeeded in her aim to promote the welfare of the many unfortunates who are afflicted with incurable diseases and are unable to provide the proper care for themselves is shown by the beautiful home situated in the southern part of our city.

**CONSOLIDATION OF MEDICAL JOURNALS.**—Announcement is made by the publishers of the consolidation of the *New York Medical Journal* and the *Philadelphia Medical Journal*. For many years both of these journals have been leaders in medical literature and both have been eminently successful and we have no doubt that the union of such forces will prove highly satisfactory to the publishers and readers alike. The consolidated journal will be published by the A. R. Elliott Publishing Company, of New York City.

**DEATH OF DR. A. B. RICHARDSON.**—Dr. A. B. Richardson, president-elect of the American Medico-Psychological Association, died at the Government Hospital for the Insane, Washington, on the night of June 27th. Stricken down suddenly just as a magnificent work was fairly begun, this association, his co-workers at the Government Hospital for the Insane and the thousands of patients who have been the subjects of his care, have suffered a blow which falls with great heaviness. The funeral was held at Columbus, Ohio, on July 1st.

**OSTEOPATHY IN NEW MEXICO.**—Candidates for licenses to practice osteopathy in New Mexico are now compelled to study this method of treatment for four terms of five months each and to have duly graduated from an institution offering such courses. This law does not permit the candidate to prescribe drugs or to perform major operations.

**INTERNATIONAL HOUSING CONGRESS.**—This Congress is to be held from July to November at the Grand Palace, in the Champs Elysees, Paris. The object of the Congress is to discuss the great need for improvement in both rural and city homes for workmen and clerks, and to this end there will be a collection from many countries of models of improved houses, of materials and models of construction and of furniture and decoration. There will also be models to show the sanitary, or rather unsanitary, conditions in factories and many other places where men work. It is expected that the work of the Congress will exert a potent influence in the control of consumption and alcoholism.

**THE TOY PISTOL AND TETANUS.**—The ever increasing sale of the toy pistol for Fourth of July celebration is resulting in a most alarming increase in cases of tetanus immediately after the Fourth. Reports from all over the country show a long list of fatal cases of tetanus following wounds made mostly by the wads from blank cartridges fired from pistols in the hands

of boys. Cleveland, Ohio, alone has had ten deaths from this source. The manufacture, sale and possession of the toy pistol and in fact all other portable firearms should be restricted by the most stringent rules and these rules should be enforced strictly. If the physicians and surgeons who are called upon to treat these cases would exert their influence with the law makers and with the public in general there is no doubt but that much could be done to lessen this increasing menace.

AN IMPROVED METHOD OF PERCUSSION.—The *Medical Times* calls attention to an improved method of percussion. Taking advantage of the value of the sense of resistance felt in the finger, as well as the percussion note, Dr. Plesch, of Budapest, has combined these advantages by a comparatively new method. He uses the middle finger of the left hand, but instead of laying it flat upon the chest, only the tips of the fingers are brought in contact with the part to be percussed. The finger is bent at a right angle at the second joint and the percussion is made over the first phalanx. In this way the vibrations are limited to a small area and are accurately brought out. At the same time the vibrations are conducted to a considerable depth into the tissues, because of the limited surface application. The value of this method has been proven by Plesch, who has confirmed the results by radiosopic examination.

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## Book Reviews

*Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition.* By PROF. DR. CARL VON NOORDEN. Authorized American edition translated under the direction of Boardman Reed, M. D. New York: E. B. Treat & Company, 1903.

*Part I. Obesity.*

*Part II. Nephritis.*

*Part III. Colitis.*

These three little books represent part of a series of short monographs based on studies in metabolism made by Dr. von Noorden and his pupils.

The monograph on Obesity, fifty-nine pages in length, deals mainly with the indications for reduction cures in simple obesity and obesity complicating various diseases. The diet indicated in various conditions is discussed in a general way rather than in detail, in fact the work is an exposition of the broad general principles underlying the treatment of the over fat.

The monograph on Nephritis is longer and covers mainly the metabolic changes, a knowledge of which underlies the therapy of kidney disease. The various forms of kidney disease and their therapeutic indications are discussed at length. The author varies in some points from the generally accepted views. We would particularly call attention to his condemnation of an indiscriminate use of the pure milk diet, his remarks on a more liberal diet in certain forms of nephritis, and his criticisms on the excessive use of water in nephritis.

The monograph on colitis deals with the so-called colica mucosa. The author discusses the etiology and concludes that the disease results from chronic constipation, associated with excessive irritability and over activity of the mucus-secreting glands of the large intestine. The treatment is carefully considered.

These monographs may be safely recommended to the profession as models of clear writing and sound reasoning based upon scientific facts. They are permeated by a leaven of common sense which is not always apparent in medical works. The translation is well done, but the book-making shows signs of carelessness, though the type is clear and large. Von Noorden's name is spelt wrong on the cover of one of the books, and in the same volume several pages are transposed.

G. B.

*International Clinics.* A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia, U. S. A., with the collaboration of John B. Murphy, M. D., Chicago; Alexander D. Blackader, M. D., Montreal; H. C. Wood, M. D., Philadelphia; T. M. Rotch, M. D., Boston; E. Landolt, M. D., Paris; Thomas G. Maston, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh, and John Harold, M. D., London. With Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume IV., Twelfth Series, 1903. Philadelphia: J. B. Lippincott Company, 1903.

Of the twenty-six articles in this volume twenty are fairly evenly divided between the sections on therapeutics, medicine, neurology and surgery; there is one in the section on dermatology and one in that on ophthalmology; there are two biographical sketches by Dr. Guy Hinsdale, one of Horatio C. Wood, M. D., LL. D., the other of William W. Keen, M. D., LL. D., and the last paper is a monograph on the blood by Dr. Thomas R. Brown.

Among the papers in the section on therapeutics is one of special interest on "The Sanitary Tent and its Use in the Treatment of Pulmonary Tuberculosis," by Dr. Charles Fox Gardiner in which the author describes the tent which he has elaborated from the tepee of the Ute Indians. In "Some Practical Points on the Early Diagnosis and Treatment of Malignant Disease of the Larynx," Philip R. W. de Santi, F. R. C. S., insists on the importance of Krishaber's division of the disease into intrinsic and extrinsic, and states that the prognosis is much better in the intrinsic variety than in the extrinsic because the lymphatic glands are seldom involved in the former. The treatment is either radical or palliative and, of the various operations, that of thyrotomy is preferred, especially in the intrinsic variety. Partial laryngectomy is advised if the lesion is too extensive for thyrotomy or if there is a rapid recurrence after this operation, but total laryngectomy is seldom indicated. Dr. E. Lancereaux con-



tributes a short article on his method of treating aneurism by hypodermic injections of gelatin and states that failures by others have been largely due to two causes,—the use of the method in improper cases and modifications in technique.

In the section on medicine there appears the report of an interesting case of pernicious anæmia with extensive pigmentary changes in the skin by the late Frederick A. Packard, A. M., M. D. E. Stanmore Bishop, F. R. C. S., contributes a paper on "Abdominal Diagnosis" in which he deals mainly with pain, tenderness and rigidity. The maximum spots of refined tenderness described by Head are given with illustrative diagrams. In "Some Clinical Aspects of Aneurism of the Aorta," Dr. Aloysius O. J. Kelly pays special attention to etiology, pathology and diagnosis.

Among the papers on neurology Dr. William G. Spiller writes one on "Traumatic Lesions of the Brain in Their Relation to Operation," and reports some interesting cases. He concludes that the question of operation in such cases is very important; that in cases of grave doubt it is wiser to operate than to run the risk of death or future epilepsy or insanity; and that every case must be much the subject of special study. In a report of a clinical lesion at the Presbyterian hospital, New York, given by Dr. Max Schlapp four interesting cases are described. In the course of his remarks on a case of syphilitic hemiplegia Dr. Schlapp insists on the importance of warning persons who contract syphilis of the danger of later manifestations of the disease and states that at least one-third of those infected have late symptoms or complications.

The first article in the surgical section is an excellent one by Dr. M. F. Fallon on the "Anatomy of the Inguinal Region and the Radical Cure of Inguinal Hernia," with three plates showing careful dissections of the field of operation. In "The Surgical Treatment of Hæmatemesis from Gastric Ulcer" Berkeley G. A. Moynihan, M. S., (Lond.), F. R. C. S. (Eng.), divides the cases into two classes, those from an acute ulcer and those from a chronic one. The symptoms differentiating the two lesions are considered and the conclusion is reached that in the acute ulcer medical methods will suffice to control hemorrhage in nearly every case but that in chronic ulcers an operation should be performed as early as possible. In a clinical lecture Dr. J. A. Bodine states that in his opinion fright is the true cause of death in most of the cases which die in the primary stage of chloroform anæsthesia. He relates several cases of death from pure fright in which autopsies showed the same venous relaxation as is found in chloroform poisoning. He believes that if the fear is eliminated by proper methods, chloroform is as safe as ether, but neglects to say why the administration of ether does not cause fatal fright.

The last ninety-five pages of the volume are devoted to a monograph on "The Blood in Health and in Disease, with a Review of the Recent Important Work on this Subject," by Thomas R. Brown, M. D., of Baltimore. The author says in the introduction that the main object of this work is "to give a critical review of the recent work upon this subject, much of which has not yet made its appearance in text books," and the

monograph certainly fulfils its purpose in a most satisfactory manner. So much work is being done on the blood that such a paper must prove useful, not only to the clinician, but to the pathologist, for full references are given to recent journals. The latest methods of staining are fully described and the reader is reminded that the examination of fresh specimens should not be neglected. The results of the most recent work on the origin and significance of the various blood cells and blood granulations, normal and pathological, are given but no new general conclusions are drawn. The writer says that the term pernicious anæmia is used differently by different clinicians but agrees with Ehrlich that, for the present, it must be regarded as idiopathic and characterized in the vast majority of cases by a special blood picture,—diminution of red corpuscles, high color index, absence of pallor in red cells and by the presence of megalocytes, poikilocytes and nucleated red cells. The importance of physiological leucocytosis is shown to be that it forbids the search for a pathological leucocytosis during the height of digestion, after violent exercise, cold baths or massage. In considering blood changes in different diseases the value of blood examination in diagnosis and prognosis is clearly set forth and the writer believes that the surgeon may often be aided in doubtful cases by the blood conditions. Twenty-five pages are given to serum diagnosis, serum therapy and immunity. After a concise general consideration of the subject, the results of the most recent work are given especially in regard to typhoid fever, diphtheria, tuberculosis, tetanus and pneumonia, though the work on other infectious diseases is also considered.

R. G. C.

*A System of Physiologic Therapeutics.* A Practical Exposition of the Methods, other than Drug-Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A. M., M. D. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street. 1903.

*Volume V. Prophylaxis—Personal Hygiene—Civic Hygiene—Care of the Sick.* 120 illustrations. By Dr. JOSEPH MCFARLAND, Philadelphia; Dr. HENRY LEFFMANN, Philadelphia; ALBERT ABRAMS, A. M., M. D. (University of Heidelberg), San Francisco; and Dr. W. WAYNE BABCOCK, Philadelphia.

*Volume X. Pneumotherapy, Including Aërotherapy and Inhalation Methods and Therapy.* By Dr. PAUL LOUIS TISSIER, Chief of Clinic of the Faculty of Medicine of Paris.

Volume Five of this system contains a vast amount of valuable and important information, collected in most available form. There are three parts, entitled, respectively, "The Origin and Prevention of Disease," "Civic Hygiene," and "Domestic and Personal Hygiene; Nursing and Care of the Sick Room."

Part I, on the Origin and Prevention of Disease, discusses first, Health and its Defences, and deals with the inanimate and animate factors of disease, which includes a review of the primordial facts of bacteriology and the biologic poisons, ptomaines, toxalbumins, toxins and venoms. This is

followed by a section upon the Diffusion of Disease, in which pollution of the air, water and soil and transmission through animals, food and utensils are described. Immunity, natural and acquired, artificial defenses, as antiseptis, and the destruction of insects are the subject matter of the next section, which is, in turn, followed by a complete consideration of the prophylaxis of the special infections.

In Part II, on Civic Hygiene, the nuisances of cities and communities are enumerated, with an estimate of their deleterious action upon health, and suggestions for abatement.

The chapters of Part III, treat of the Hygiene of Dwellings, School Hygiene, Hygiene of Travel, Personal Hygiene and the Hygiene of Special Periods and of the Diathesis; and the Care of the Sick Room and the Patient. The volume concludes with a chapter on Special Nursing.

From this synopsis of the contents, the comprehensiveness of this volume may be seen. It is a representative work, and in many respects, a medical milestone, as a synopsis not only of what is known in the etiology of preventable disease, but also, of the measures for prevention; upon either of which modern medicine might justly rest its claims as a progressive science. Unfortunately all ideals are not attainable, but statement of them in this definite form, carries a weight of suggestion and speeds the adoption of prophylaxis, by preaching its gospel. The book is a valuable one, and should be read by every physician and by every public sanitary officer.

Volume Ten is divided into two parts, upon Aërotherapy and Inhalation Methods, respectively. The section upon Aërotherapy is an extensive description of the dynamics of Compressed and Rarefied Air. Many interesting events are discussed and the historical resumé of deep-sea diving, caisson experiences and ballooning make quite attractive reading. The apparatus for the therapeutic use of gases and vapors is described, and formulas and methods are included in the final chapters of the volume.

The publishers have done well and some minor changes in style from the earlier volumes, render a more attractive page.

# ALBANY MEDICAL ANNALS

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## Original Communications

### HYGIENE IN THE PREVENTION AND CURE OF DISEASE.

*The Annual Address delivered before the Medical Society of the County  
of Greene, at Cairo, N. Y., May 12, 1903.*

By GEORGE HANER, M. D.,

President of the Society, Tannersville, N. Y.

*Gentlemen:*

The subject of hygiene in the prevention and cure of disease is one which receives from medical schools, medical journals, and in medical discussion, comparatively little attention; and, though the medical profession may not, and probably do not, underestimate its weight, it is a subject, of the importance of which the laity in their profound faith in the miraculous powers of medicine, have little conception. I have so frequently found my patients so neglectful, unmindful or ignorant of the simplest, plainest rules of hygiene in the care and preservation of health and the cure of disease, that it has often seemed to me of more utility to give instruction in hygienic care, than to prescribe medicines, and this experience in practice is my excuse for the selection of my theme.

The subject is one which, in this progressive age, should be regarded of vast importance, and should claim much attention from the medical profession; for, while our predecessors were only consulted, or called in, to combat complications and death when disease had already appeared, it is reasonable to assume that our successors will be much consulted, as to means and methods, by which disease and death, or pain and debility, may be avoided.



There are few people, who, having reached middle life, cannot appreciate how much better their physical condition, and their powers of physical and mental endurance might have been, had they been more intelligently and carefully guarded and guided as to their habits and customs of life during childhood and adolescence, by suitable hygienic advice and care, while both physician and patient in many cases of serious acute disease, can recall violations of the simplest, plainest rules of health, as a positive direct cause.

Nor is it alone in the prevention of disease and of impaired strength and vitality, that hygiene holds so important a place; for in the treatment and cure of many diseases, both acute and chronic, the matter of hygienic treatment and hygienic measures becomes so important a factor to the experienced physician as to overshadow the administration of medicines and render them of very little importance and, occasionally, of none at all. And yet we must, until the public whom we serve is better educated on this subject, go on giving medicines, many times against our better judgment, and when we know our patient would at least do as well, if not better, without them; for from the standpoint of the laity, whom we must try to please, and whose views and opinions we have always to take into account, the chief duty of the physician is first, to make a diagnosis and, next to give medicines that will, at once, relieve the symptom and cure the disease. They do not understand, and it seems difficult to teach them, that, in his knowledge of etiology and pathology, with his advice of a hygienic character, prognosis and general directions for care and nursing, the physician is able to give them more aid and comfort, than in prescribing medicines. And so prevalent, fixed and general has this idea of curing every ill with drugs become, that the physician in his desire to please his employer, is influenced to write many prescriptions of doubtful utility, and sometimes even to neglect or omit the other far more important part of his duties—that of giving careful hygienic instruction and direction—or he at least fails to sufficiently impress his patients with the importance with which he regards these measures.

In a first visit to a case of acute disease, I would, after arriving at a probable diagnosis,—which may usually better for a little time, at least, be withheld—point out to my patient, or to his family, or the nurse in charge, where errors in hygiene had been etiological factors, give such directions as are required for re-

moving causes, if they still exist, rules for diet, for rest, for temperature of room, and such other hygienic instruction as the conditions seem to require, and make a provisional prognosis, depending on a strict observance of, and obedience to my hygienic instructions and directions, before I would approach the subject of medicines, thus impressing patient and friends with the relative importance with which I regard hygienic and medicinal elements in treatment, for that the medicinal treatment holds second place, I believe holds true in most cases of acute disease. And while the more important part of treatment is hygienic in character, the diagnosis will also often depend upon considerations of etiology which are purely hygienic.

And not only does medicine stand second to hygiene, but 'tis a fact to which most physicians will attest, that, except for the pandering to preconceived notions of patient and friends, many cases of self-limited, acute disease, especially in healthy young subjects, are as well treated without medicines as with, or that medicines, at most, play a very unimportant part in the treatment of such diseases.

Few physicians would claim, and the evidence is not conclusive or convincing, that the creosote, the ammonia, the veratrum, the strychnia, the digitalis, the antipyretics, the quinine, the sulpho-carbolates, or the whiskey, we feel impelled to prescribe in pneumonia and specific fevers, have much influence toward recovery, while none would undertake the treatment of such cases without placing much stress on absolute rest, uniform correct temperature, suitable room, properly regulated and suitable diet, and many other hygienic measures, which occur to us, as being of vastly more importance than any medicines at our command.

Again, in many chronic cases that come to our offices for relief and treatment, such as headaches, palpitations, insomnias indigestions, vertigo, constipation, anorexias, and anemias, if we could control, absolutely, the habit of rest, diet, exercise, excesses of all kinds, use of narcotics and stimulants, overwork of body and brain—if we could completely regulate the patient's habits of life and thus treat him hygienically—we would have little use for medicines.

As we study this subject of hygiene in the practice of our profession, we come better to understand the familiar saying, that "the older the physician the less medicine he uses." Our patients come to our offices or send for us, assuming that we are to, at

once, give them several prescriptions, or deal out for them as many different medicines. This they believe to be our first and most important duty. They never have a doubt that medicine is the one and only thing they need, and, if the doctor is wise in his business, his medicine should cure them. Tradition and custom have so indelibly fixed this idea, that it becomes difficult to teach them, or make them understand that there are hygienic considerations in their sickness, its cause and cure, of much more importance to them than drugs, and that natural laws and a careful attention to, and regulation of hygienic means and measures, are far more important factors in bringing the relief they seek, than any medicines can be. And this same mistaken notion of the character and uses of medicines is responsible for the vast quantity of patent or proprietary medicines sold and consumed.

It is a mistake of great import for evil to mankind and one in which the race needs much instruction and education. It is a condition which to my mind is due largely, if not entirely, to the custom of our predecessors in practice, of blindly prescribing so-called tonics and alternatives in convalescence, antipyretics for every fever, diuretics, stimulants, sedatives, expectorants, and so on, through a list of routine medicines, suggested by some transient symptom, that we too are often prone to use, when our better judgment tells us our patients are as well if not better off without, but which we still feel impelled to prescribe, because it is custom or because our patients seem to demand them. It is a pernicious and unscientific practice, and one to which physicians should unreservedly call a halt. It is acknowledged that it is a fashionable and popular procedure, and that the physician who prescribes the greatest quantity and variety of elixirs and tablets, whose chief aim is to cater to the whims, notions and prejudices of his patient, is usually, very popular and successful for a time, and that, in some instances, a little pandering to our patients' notions and prejudices, brings us fame and financial success. I digress to illustrate: Said a celebrated physician to his office boy, "Did the lady in the consulting room come by trolley or in a coupé?" If in a coupé, a trip to Europe, a thorough course of electricity, or a season at his sanitarium, will be a satisfactory prescription. If by trolley, rest, out-door exercise, regular hours of sleep, a restricted and regulated diet, with occasionally a compound cathartic pill or a dose of Epsom salt, will probably be a very suitable and satisfactory prescription. Of course, if the



lady of the coupé is given some correct hygienic advice and told she needs no other treatment, she will probably seek another physician. But the question arises, shall we be honest with our patient and ourselves, without regard to consequences, or shall we use diplomacy and chicanery that we may gain popularity and increase our practice? I will admit that something may be said for both sides of the question and that, after all, each case may be governed by conditions, and circumstances, requiring or permitting considerations and management that can be regulated by no general rule. But it is not alone in the treatment of diseased conditions that hygienic means and measures play so important a part. It is in the field of preventive medicine, which is fast becoming a very important part of, and factor in the work and practice of the physician, and which promises to almost revolutionize the practice of medicine in this twentieth century, that hygienic treatment, and advice is pretty nearly the sum total of the physician's duties and practice. Though it may diminish the work and even lessen the income of the physician, it is still his bounden duty, when he has become the medical adviser to a family, to guard the life and health of his patrons whenever opportunity offers, and even to seek opportunity, with hygienic directions, instruction, advice and warnings; for from earliest infancy to old age the simplest laws and rules of hygiene are constantly violated or ignored. Yes, months before the child sees the light, is its vitality assailed and its constitution wrecked by imprudent excesses and omissions of the mother, while in a few short hours after birth, the omissions and mistakes of an ignorant nurse or midwife, or the indifference of a careless doctor to the simplest hygienic care, may lead to permanently impaired sight or a diseased mouth which may threaten the life of the child or cause infection which may lead to serious inflammation and mammary abscess in the mother; while alcoholic and other excesses and hygienic errors, during her child's intrauterine life, may become responsible for malnutrition in infancy, chorea and epilepsy in childhood, and hysteria and insanity in after years. It therefore becomes the physician's duty, and he should feel bound by sacred obligations, to enjoin and reiterate hygienic rules for the prospective mother, that will at least reduce to a minimum, the probabilities of any of these results. While we find the hygiene of the pregnant woman of vast importance in averting evil from the offspring, medicinal therapeutics are of compara-



tively little use for this purpose. No sooner is the child well launched on its journey of life than violations of hygiene in the form of cold and exposure from without, and improper and defective feeding from within, all of which are avoidable without medicines, begin to assail it, and it becomes the duty of the physician to carefully and constantly supervise and direct the doings and correct the mistakes of both nurse and mother. The mortality of infancy, especially in cities, is most appalling. In New York city one-fourth of all who die are infants under one year of age. The principal factors in this great mortality are asphyxia, infection, hemorrhages, convulsions, diarrheal disease and pneumonia, nearly all of which may be eliminated by more intelligent care and attention to infant hygiene on the part of the nurse and mother, and a closer attention to hygienic directions and advice on the part of the physician. I can vividly recall many cases in practice of fatal sickness in babes—as no doubt you all can—originating in some apparently trivial neglect of precautionary hygienic care or measure on the part of the nurse or mother. The window was left open or the child was too long exposed to evening air. The bottle was given too cold in the night-time or the carriage was left too long standing in the sun. While the physician cannot control all these things, I emphasize the importance and necessity of giving much and frequent instruction and many admonitions and warnings in infant hygiene. I believe the physician can save more lives in the prevention of diseases in childhood and infancy, by advice and instruction to his patrons and to the public generally, in hygiene and infant feeding, which is only a branch of hygiene, than in any or all other departments of his work, and that the great majority of ailments from which children die is within the power of hygienic treatment alone to prevent, and that this subject receives altogether too small a place in medical education.

In a large majority of acute ailments of infancy, when, through mismanagement and neglect, they have come about, hygienic care and advice are far more important than is medicine in treatment and cure, and hygienic advice and care, properly carried out, leave little to be done with or expected of medicines in these cases. In acute diseases of the digestive tract—eliminative cathartics excepted—it is probable that more harm than good has been done infants with drugs. The hygienic measures, rest, restriction and regulation of diet alone, will cure more cases than internal anti-

septics, medicinal digestives, antipyretics, and drugs for every symptom we discover. And the same general rule applies to the self-limited acute pulmonary diseases we so frequently meet in children, and diseases of the same character in adults as well. Rest in bed, careful regulation and selection of food, proper uniform temperature, relief from all mental worry or care, cleanliness, exclusion of too solicitous friends from the sick room, are some of the hygienic measures that demand our first attention, and are always paramount to the medicinal treatment. From childhood to old age mankind is prone to violate the simplest laws of health, and if prevention of disease is a duty of the physician, then he must embrace every opportunity to enlighten and instruct, by precept and advice, the community among whom his lot is cast and who look to him to prolong their lives and conserve their health.

In infancy the matter of the frequency and temperature of the bath, the temperature of the room at different seasons of the year while giving it, manner of drying; the weight, quality and fit of clothing; taking out in the air, exposure to or protection from the sun, exercise, first sitting up or standing, periods of nursing and sleeping, ventilation and light of room, are all subjects for advice and instruction by the physician.

In childhood, the quality of food, cleanliness, a suitable place to sleep, clothing and exercise are matters, the proper regulation of which is much neglected, and may properly be inquired into and directed by the medical attendant.

At the approach of puberty, and up to the age of twenty years, hygienic treatment, especially in the female, becomes exceedingly important. Physiologically, the special feature of this period is rapid growth of the whole body and perfecting of the functions of all organs, and more especially of the organs of reproduction, since in doing this last, nature often seems to draw too heavily on resources belonging to the general system, thus causing complaints of palpitations, anemia, constipations, poor digestion, choreic symptoms, general languor and headaches. In such conditions the physician will do well to inquire into and carefully regulate the amount of exercise, which may be too little or too much, and the hours, nature and amount of study and school work. The necessity for regular hours for sleep, food, exercise, study and work should be thoroughly taught and enforced, for this is the age of all others, when good or bad habits are formed

for life, and the time too when seeds of disease are sown broadcast, to spring up later in the mature life of man and womanhood with dire results to health, happiness and destiny.

The strenuous work required in a high school course, as outlined by school authorities at this time, and which is undertaken by many youths during this period, is, to my mind, detrimental to a proper physical development, and it becomes incumbent on the family physician to see to it that permanent damage is averted, by instructing that much attention be given to gymnastics, that all outdoor exercise possible be taken, and that advantage be taken of every opportunity for relaxation, recuperation and rest.

This, too, is the period when the menstrual flow is inaugurated, when we are so often consulted by anxious mothers, because of its irregularity during the first months or year of its appearance. Hygiene and a patient waiting for nature usually leave little use for chalybeates and emmenagogues in these cases. It is the period in which youths are prone to form tobacco and drink habits to such degree as to undermine the health and prove a lifelong handicap, or even shorten life, in very many cases. The physician, in a proper performance of his duties, should frequently urge and point out the hygienic evils attending these habits and practices.

While proper hygienic guidance and care, during this period are invaluable and far reaching in their effects on the physical development, strength and health, incidentally, they may prove of inestimable value also, in their influence on character and social standing during all the years of mature life.

During adult life, from twenty to fifty years of age, violation of and indifference to hygienic laws and hygienic common sense lead to the loss of many a life that should have been prolonged to old age, or they make suffering invalids of many whom nature endowed with strength and health for a long life, free from pain and disease. Overwork, loss of necessary sleep, excessive use of tobacco and spirits, irregular and too rapid eating, improper food, sexual excess and criminal abortion, are some of the chief sins against nature, during this period, that wreck the health and destroy the lives of many human beings. The physician who commands the confidence of his people, can do much in a hygienic sense, to restrain and stamp out these evils if he will constantly teach and inculcate self-restraint, moderation and a decent regard for moral and social laws and requirements.



In dealing with hygienic transgressions and evils of adult life, even from the medical adviser's standpoint, we may well emphasize the moral, social and economic questions and influences involved, as well as their bearing on the individual life, health and destiny, of both the present and succeeding generations. Most flagrant of all hygienic sins of this period is the constant meddling and interference with nature's efforts at reproduction. The many expedients and devices resorted to for the prevention of conception and procuring of early abortions constitute an appalling crime against nature and society, against good morals and the human race; besides, causing much suffering and disease and wrecking the health and destroying the lives of those practicing them. Though the physician must not ignore the criminal side of this subject, hygienic considerations alone require that he not only instruct and advise, emphatically, against these practices, but that he denounce and condemn them in no uncertain terms. This evil is no doubt on the increase, and the consequences threaten disastrous results of serious import to society, the nation and the human race. If reformation come at all, it must come through the influence, teachings and denunciations of the medical profession. It is during the later part of this period, too, that there is often a morbid tendency toward obesity, dyspepsia and gout, due usually to sedentary habits of life and occupation. At this time we also get a tendency to degeneration of visceral organs and atheroma of arteries, which morbid conditions are at least delayed by instruction in, and attention to, suitable hygienic rules pertaining to food, rest, exercise and clothing suitable to this period of life.

During that period of life from forty-five years to sixty years, the turning period, when the heart grows larger and its walls thicker, the lungs become denser, the sexual powers decline and wear and tear begin to tell in every part and function, the physician can do much in a hygienic sense to promote comfort, avert disease and prolong life. Abstinence from all excesses in labor, exercise, food and drink, should especially be the burden of his teachings during this period. Warmer clothing, less exposure, avoidance of emotional excitement, and sexual stimulation, are important hygienic measures in conserving health and life during this period. It is at this age that males seek medical aid and advice for failing sexual strength, and must be taught the hygienic lesson of graceful submission to nature's law of decline and decay,



rather than encouraged by medical stimulation and dosed with so-called aphrodisiacs. Females at this period suffer and seek medical aid for many so-called functional disorders which they think medicine should cure, that are only physiological processes, consequent upon transition from active ovaro-uterine life to total cessation of sexual power and function. They must be taught the hygienic lesson that time, nature and a careful observance of all laws of health, and not medicines, will cure most of these unusual symptoms and sensations. People who have reached the age of sixty without organic disease of vital organs, and with no intemperate or other destructive habits are, for a few years, less liable to disease than at any other period of life, and require less hygienic care. Their habits of life are so fixed and formed that they do less violation to natural laws and their vital organs do not yet suffer natural decay to the extent of bringing failure in their functions. The hygienic lessons pertinent to this period should teach less work, longer vacations, more careful protection from cold, and freedom from the more perplexing business cares.

From sixty-five or seventy to extreme old age, when all organs and their functions begin to fail by reason of natural decay, hygienic care again becomes of much importance both in promoting comfort and prolonging life. The decline and degeneration of man is characterized by a thickening of capillaries, a wasting of muscles, a lessening of subcutaneous tissues, poorer and paler blood, and dryness and lessened secretions of the skin. Hence it is of hygienic importance that the old should be shielded and protected from cold, that they are never exposed to inclement weather, that clothing be extra warm, and that they have well heated rooms, both by day and night. The teeth loosen or have entirely decayed and the digestive juices fail. Hence it becomes of hygienic importance that the food be suitably prepared, that it may conform to their enfeebled powers of mastication and digestion. In short, they come to need constant care in every act and function of life. Extra attention, a manifestation of affection, and much solicitude for their health and comfort on the part of their physician, becomes to them a potent hygienic measure. Daily use of a moderate amount of spirits in extreme old age often cheers and comforts, while it can possibly do no harm. Much attention must be given to the action of the bowels. Periods of sleep during the day go far to save their failing strength.

Hot foot baths at night and artificial heat in the bed are useful both for health and comfort.

Thus from earliest childhood to extreme old age does the physician find the science and practice of hygiene a most important adjunct to, and a most potent factor in, the practice of his profession, in the prevention and cure of disease, and in promoting the comfort and prolonging the life of his people. Other subjects, such as disinfection, drainage, ventilation, and a general supply of pure water, are hygienic in character and are of much importance in the preservation of health and the care of disease. They are subjects which will claim the attention of the physician and on which he must be prepared to give instruction and advice.

In conclusion, I do not want to be understood as preaching a doctrine of nihilism in medicine, nor as deprecating the importance of a proper judicious use of therapeutic measures and treatment in suitable cases, of which there are many both acute and chronic. But the question of whether we shall or shall not use medicines in given cases is one requiring careful consideration of the etiology, physiology and pathology involved, as well as the idiosyncrasies, age and strength of our patient, and should, after diagnosis, claim our first attention in every case. If there are no positive indications for medicines, better use a placebo and wait and watch till positive indications arise, than make routine prescriptions of active medicines. For with the prevailing prejudices, notions, and traditions among the laity, of the efficacy and miraculous powers of medicines, I believe a moderate restricted use of placebos justified and proper, when we see no indication for active medicines and our presence and attendance are yet required to watch and wait for developments and complications when positive demand for active medicines may arise.

It has seemed to me that, with the multiplication of ready-made tablets, elixirs, pills and extracts for every symptom and disease, and the prevailing belief among our patients that there must be medicines for every ill, we are sometimes apt to use more medicines than is best, and that many prescriptions are given that better be withheld. I believe the public should be taught, and that it is the legitimate province and duty of the medical profession to teach, that, while suitable medication is essential and important, hygienic precautions, care and measures are much greater factors in the preservation of health and the cure of disease than they

think them to be, and should receive more attention than is usually accorded them; and that our patients, as a rule, place too much stress on taking medicines and attach quite too little importance to hygienic means and measures. I believe that these erroneous ideas and notions of the powers of medicine, and persistent neglect and ignorance of hygienic laws, seriously handicap us and add many complications to our work; and that there are few cases in which hygienic instruction and measures are not, at least, as important as medicinal treatment, and that more emphasis should be given such instruction than it usually receives.

Dr. Austin Flint has so exactly and so well expressed my thoughts that I venture to quote: "The time may come when the visits of the physician will not, as a matter of course, involve the co-operation of the pharmacist; when medical prescriptions will be divested of all mystery, and have no force in the way of fortifying the confidence of the patient. The medical profession will have reached an ideal position, when the physician, guided by his knowledge of diagnosis, the natural history of disease and existing therapeutic resources, may with neither self-distrust nor the distrust of others, treat an acute disease by hygienic measures without potent medication. When this time comes, a system of practice which assumes to substitute medicinal dynamics for *vis medicatrix naturæ* will have been added to the list of by-gone medical delusions."

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## PREVENTION OF SMALLPOX.

*Read before the Medical Society of the County of Albany, April 22, 1903.*

By F. C. CURTIS, M. D.,

Professor of Dermatology, Albany Medical College

There are three things to do to control smallpox: isolate, disinfect, vaccinate. Of these the most important is to vaccinate.

*An unvaccinated person is a menace to the public health.*

*To have smallpox is a crime against the community.*

These are two broad propositions which with reasonable interpretation furnish a fair basis for the attitude to-day of health authorities toward the individual in his relation to this disease.

The average cost of outbreaks of smallpox to the city of Lowell, Mass., varying from 1 to 131 cases, occurring in various years, is

reported to have been \$300 per case. This was the cost to the municipality.

Our experience in this state has been very variable as to municipal cost; to some I know it has been more than \$300, but I think that is excessive and far beyond the average. No one can estimate what smallpox has cost the State of New York since 1898, with 923 deaths and many thousands of cases, but to the public alone, not counting individual loss and fatality, it must have been very great.

This has been recognized and there has been a fair disposition to act on it by legislation to control smallpox. In a recent opinion the attorney-general says: "for a good many years it has seemed to be the policy of the legislature to encourage, if not compel, general vaccination." We have more conservative laws than Massachusetts, but we have a school law which requires that unvaccinated persons be excluded from the public schools, and wide discretion is given to health authorities to enforce vaccination in the presence of smallpox prevalence.

It is becoming accepted that vaccination is the panacea for smallpox even by the public. I personally have every reason to believe that it will prevent it, for I have for many years come in frequent contact with the disease and vaccination has been my only protector. I have known of multitudes of people who have had the same experience. Under my observation of forty children in an orphanage, all but one, who was vaccinated, took the disease and also two adults, whilst others vaccinated in childhood escaped. This is universal testimony. I have never known a case in which its conditions were complied with where it failed to protect, and nothing else will except to have had smallpox. I know of no agent in the hands of physicians concerning which so absolute a statement can be made.

There is at the present time a decadent pandemic of smallpox, commencing in 1898 and probably reaching its acme in the winter of 1902. It is but a repetition, on a milder scale of type but more widespread, of that of 1870-'73. Both followed war, the Franco-Prussian war spreading it over Europe, as ours followed the Cuban war, its milder type possibly being due to its tropical origin, the virus being attenuated under heated conditions, as suggested by Lee, of Pennsylvania. Prior to both outbreaks there had been a stagnation of interest in vaccination as a prophylactic measure.

It is almost unfortunate that our present pandemic has been so



generally mild, since its lesson has not been sufficiently emphasized. Smallpox has not to-day the terror, as we now encounter it, that it had a century ago when it caused one-tenth of all the deaths in Europe. It would be hard now to realize how inoculation could be prized as a means of immunizing.

The prophylaxis of smallpox by inoculation of human smallpox was of far greater value than we have been accustomed to consider it. Its effect was complete and it saved many lives. It had an estimated mortality at the end of the eighteenth century of about 1:300, but that was an immense gain. In the hands of Angelo Gatti, of Pisa, by using clear lymph from lesions before they became clouded with pus, and with selected subjects much better results were secured than at first. Its course was much like vaccination, viz: local reaction set in on the fourth day, papules forming, which became vesicles and continued so to the seventh day, when a stage of maturation set in lasting three days with active fever. Then on the eleventh day generally a variolous exanthem appeared over the body, the original pocks desiccating, and a variable course followed. This eruption was rarely abundant and sometimes was lacking, the course of the disease being generally mild, like varioloid of to-day, the lesions healing without scar.

Notable is the short period of incubation, like that of vaccinia, for the local lesions, and the subsequent mild varioloid exanthem at near the incubation period of variola. It is to be remembered too that the disease was identically contagious with variola, wherein it differs from vaccinia.

If human variola is inoculated into cattle there follows simply a local, not a general eruption, and the same is true if this bovine virus is inoculated to other cattle. I believe that it is generally conceded now that vaccinia (of cattle) is nothing other than the original product of human variola, and consequently that bovine virus is variola modified by transit through the bovine species. It is not a spontaneous disease of cattle. There is a fact to be regarded withal, that it is not safe to use variolous lymph until it has passed through at least three or four bovine animals, for a return to variola has been found to follow its transit through a single individual. This in fact did much to discredit it from experience in early times of English boards of inquiry.

In the medical profession there is practically universal belief

in vaccination. A circular sent out by the health officer of Albany asking for its endorsement received practically unanimous signature.

The arguments of its few opponents are chiefly: that it does not protect,—to which there is no need of further answer; that it is a source of danger, from introducing various diseases and from the disease of vaccinia itself and the severity of the lesion attending it.

The danger of vaccination is a very reasonable subject for discussion. Practically I believe there is none if the simple conditions of its use are complied with. These conditions are faultless virus, faultless technique, and protection of lesion from external infection.

*Virus.*—It is too late now to advocate the use of human lymph, but there are to my mind certain advantages in it over animal vaccine material. Years ago I came by some true Jennerian virus, from the late Dr. Snow, of Providence, who long maintained its propagation, having received it from the Jennerian Society of London. This society, so far as I know, still exists, having kept an unbroken series of vaccinations conducted down from that received directly from the hand of Jenner. I noted this, and I am inclined to believe it will be found mainly true, that this human lymph remote from the cow produced a vaccinia that had a uniform period of incubation of three days, was less violent in its action, was uniform in its evolution, and was terminated with the production of a crust that was round or oval, abrupt edged, amber in color, without admixture of pus or lifted from its base by purulent discharge beneath it.

Child-lymph is surer to take and produces a regular and mild vaccinia. There is no better vaccination to-day than with arm-to-arm virus, taken on the seventh day while the lymph is still clear. The Jennerian Society has seemed to prove that in human transmission the virus does not degenerate. But it certainly should not be used except from selected subjects.

I think, however, that men who have practiced fifteen or twenty years have noted a milder quality in the bovine lymph of to-day than it had years ago, although it still lacks the uniformity of action which child-lymph has. I read a paper before this society fifteen years ago on vaccinal rashes; these are far less common than formerly, at least I seldom hear of them. The risk of introducing syphilis, with which it is impossible to infect cattle, al-

though remote with child lymph under proper care, will always count in favor of bovine virus, and tuberculosis can be excluded by autopsy of the calf.

Bovine virus to-day is far better than that of years ago, and the competition of producers stimulates every precaution. If clear lymph of the fourth or fifth day (for the lesion matures more quickly in the calf) is used, with glycerin added to destroy extraneous micro-organisms, it should be trustworthy. (Other substances to which the effective principle of vaccine virus is resistant—borax, boric acid, carbolic acid and chloroform—have been experimented with by the Local Government Board of England, but so far as I know, are not in practical use.) I believe, however, that the state, if it makes vaccination to any degree compulsory, should make its own virus instead of trusting for its purity to commercial incentives, should surround it with every precaution and test and standardize it just as is done with diphtheria anti-toxin, and furnish it freely.

*Technique.*—Vaccination is a simple operation, but its most patent requirements are often disregarded. I once saw a health officer with a little jar of glycerinated virus vaccinating a row of children with arms just as they came unwashed, dipping his lancet slightly wiped on a towel into the liquid after each scarification—the unclean sleeve pulled down and the child sent his way without instructions. It is strange if ill results fail to follow such work.

First, as to a *site* of its performance. There are good reasons for saying that it should always be done on the arm; this is most accessible for performance and subsequent care, it can be best protected from injury during the time that the vaccine sore is active especially from the pressure or friction of clothing, and the circulation is more active than in dependent parts of the body. But of chief importance is to select a site free from underlying muscles, since with every movement of such muscle the overlying skin is put upon the stretch and is a source of unavoidable irritation by tension and pressure upon the inflamed point. Vaccine scars are sometimes found on the calf of the leg or upon the shoulder or over powerful muscles elsewhere, which must have been a needless source of pain and irregular evolution of the lesion. No point on the surface of the body offers such advantages as to site as just at the insertion of the deltoid muscle of the left arm, and if a second insertion is made it should be two inches or two and a half above and posteriorly over the edge of the same muscle.



If done on the leg, which is unwise, probably the best site is at the inside of the knee over the inner condyle of the femur.

Is it desirable to vaccinate in more than one place? Experience shows that the duration of protection from smallpox, and from mortality of it, is greater in proportion to the number of good cicatrices of vaccination. The protection is measured in good degree by the quality of the vaccination as shown by the number, the size and the character of the scars. It appears that a person taking smallpox who has four vaccine scars has a probability of recovery fifty times greater than one who has not been vaccinated, and ten times greater than if he has but one [Marson]. It is true that Jenner recommended but one point of vaccination, but I believe that multiple vaccinations have been shown to not only make taking surer, but immunity conferred greater.

Our State Department of Health reports are not explicit enough to contribute data on this, but the more exact observations in large hospitals for smallpox show it.

Cleanliness of the site should be secured. Preferably the individual should take a general bath and have on clean underclothing. The arm may be cleaned by applying a lather of clean soap for a few minutes or rubbed with moist carbolic or salicylic or sterile cotton washed off with boiled water, or rubbed with alcohol.

Of more importance is it that the instruments and hands of the operator be clean. Using glycerinated virus sealed on a sharpened ivory point, this point seems to me in every way best for making the abrasion. Otherwise a new needle or one sterilized by heat. A tearing rather than a cutting instrument is best for it is difficult to use a lancet without wounding too deeply the capillary loops in the derma. It is desirable simply to reach the lymph spaces of the germinal layer of the epidermis and not to injure the corium. Two or three shallow tears or scarifications can be made just sufficient to draw tinged serum; or cross hatching of a rectangle one-fourth inch in area can be made. Some skins are more tense than others and with them the light touch of the point of a lancet may produce the result with less pain and damage.

The virus should be rubbed in with the flat side of the point for a minute and the surface left to dry, nothing being allowed to touch it or rub it off.

Subsequent care consists in instructing the subject as to the care that no soiled thing shall come near it, and to protect it from soiling and friction. A clean folded handkerchief can be pinned



over it, or the same can be fastened inside the sleeve. My preference is lay a bit of sterile cotton over each abrasion and retain it with a strip of adhesive plaster. This gives the most absolute protection and if it proves a source of irritation with subsequent swelling it can be loosened, the cotton if adherent being snipped away as much as necessary. This is preferable to shields.

What should result? After three days a red papule, becoming larger and covered with small, chambered vesicles on the fifth day, completely vesicular with clear lymph on the seventh or eighth days, with a glistening, translucent margin of pearly appearance and with a pale red areola, accompanied by a little fever and malaise. Clean vaseline to the areola will relieve the tension or better, a compress of sterilized water. Aside from a more prolonged period of incubation which I think may be looked for with the use of bovine lymph, this should be the evolution of a normal vaccination.

What are contra indications to vaccination? Practically none except acute illness. Even feeble infants bear it well. Every child should be vaccinated between the third and sixth month, prior to teething. How long will vaccination protect? In very many cases infancy vaccination has protected adults. Nearly all are protected by a second vaccination at about twelve years. We have reports of varioloid within two years and even six months of alleged vaccination, but no one knows what it consisted of. But it is never possible to know how soon one's immunity is lost and while it is likely that it is maintained for not less than ten years, during an epidemic and after certain exposure even with a true vaccination within that time a repetition will be in the line of safe precaution.

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## SOME SEQUELÆ OF SMALLPOX.

*Read before the Medical Society of the County of Albany, April 21, 1903.*

By JOSEPH D. CRAIG, A. M., M. D.,  
Professor of Anatomy, Albany Medical College

I desire to present very briefly to the Society some of the more interesting sequelæ of smallpox. This paper is founded upon personal observation of something over two hundred cases of the disease occurring in the City of Albany during the past three years and upon the pathological, bacteriological and histological

investigations of Dr. Councilman, of Boston, and Dr. Ewing, of New York. Dr. Councilman's report is based upon the result of autopsies upon fifty-two subjects dead of smallpox and subsequent laboratory investigations, and Dr. Ewing draws his conclusions from autopsies and bacteriological experience upon thirty subjects dead of the same disease. The result of one autopsy, a smallpox patient, performed in Albany, by Dr. Blumer, did not materially differ in results from autopsies made elsewhere. The papers of Drs. Councilman and Ewing embodying the results of their investigation were read at the last meeting of the American Medical Association and an additional paper on the same subject was subsequently presented by Dr. Ewing at a meeting of the New York Pathological Society. Some additional papers presented by other observers have also been considered in preparing this paper.

I wish to exclude from the paper the consideration of such complications of smallpox as capillary bronchitis, pneumonia, abortion and acute parenchymatous nephritis, or of such subsequent infection as tuberculosis, or of the tendency to hasten the progress of other diseases; such as epilepsy and cancer. All these pathological varieties are on record in association with smallpox, but so they are also with other specific diseases and the reason therefore is of common knowledge.

It is as true of smallpox as of other diseases due to the invasion of the human body by bacterial parasites that the disease will, as a rule, conform to type. But in common with all other specific diseases, smallpox will many times depart, sometimes widely, from the general sequence of events. In the beginning there are puzzling rashes and atypical temperatures; during the course of the disease there are aborted vesicles and unexpected subsidence of symptoms and at its close sequelæ annoying to the patient and prolonging quarantine.

It is convenient to classify such sequelæ as are to be considered in this paper into those which are the result of

- 1—Dermatitis,
- 2—Hypertrophy of the base of the lesion, and
- 3—Secondary infection.

1—*Dermatitis*. A persistent dermatitis, non-specific in character, very frequently results from the lesion of smallpox. Such inflammatory reaction usually appears in its simplest form about the margin of the inflamed pock areas. Such inflammatory

manifestation may persist for many weeks or months. At times such inflamed areas have a more extensive and severe reaction and have been mistaken for a continuance of the smallpox lesion itself. A case of this kind sent a year ago to Dr. Curtis by the health authorities of Schenectady is most instructive. This patient, a man, had been detained in quarantine for a period of over three months before the nature of the skin lesion had been appreciated. This dermatitis was particularly to be observed on the face, neck and hands, corresponding to the usual site of the pustule of smallpox, and consisted in the rapid proliferation of the epithelial layer with the subsequent casting off of a multitude of bran-like scales from roughened, reddened and inflamed areas, corresponding nearly and largely to the location of the original site of the smallpox postule. As these areas were diffuse, yet not widely separated, the amount of tissue involved was very considerable.

There is an extremely practical bearing to these cases. It is a question at what time these areas of dermatitis cease to be infective. There is a very wide difference of opinion regarding the safety line beyond which it is proper to release quarantine. In the absence of positive or even satisfactory evidence of the identity and life history of the bacterial cause of the disease, it must be necessary for the present at least for health officials to err on the side of public safety and to prolong the quarantine, however irksome to the individual, until the nature of the inflammatory reaction is with the greatest probability nothing beyond a simple dermatitis. In those cases, where, after a prolonged quarantine, some dermatitis still persists, the patients have been discharged, no cases of infection have been known to have arisen. However, no law can be formulated for the conduct of such cases. The conditions surrounding each individual require separate consideration. If the modern views of the bacteriologists are correct, there is little, if any, difference between the dermatitis persisting after the lesion of smallpox and that following the eruption of scarlet fever. While I presume that desquamation is a consequence of dermatitis, still it is wise to think of desquamation in scarlet fever as a process associated with the presence of the specific cause of the disease and dermatitis as a later inflammatory process persisting after all specific bacteria have disappeared. The same distinction can be made between the specific inflammatory lesion and the dermatitis of smallpox. I do not think,



however, that as a public measure these directions should be given much weight unless the dermatitis in either case is prolonged far beyond the period of possible doubt.

2—*Hypertrophy*. Hypertrophy of the base of the smallpox lesion is another sequel of interest. These hypertrophies occur in all forms and degrees of lesions. Neither the size of the eruption nor the severity of the symptoms seems to influence their formation. It is probable that a diminished vitality of the individual is responsible for their growth. The dwarfed form of the eruption, in which there is apparently an abortion of the smallpox lesion, which after reaching normally the papular stage rapidly retrogrades, is apt to have a resulting hypertrophy of lesion as the large fully-developed and typical pustule. At least one case of hypertrophy was observed to develop in each of these two extremes of pox eruption among the patients in this city. At the close of the usual eruptive cycle, when after the rupture of the pustule and the drying and extrusion of the resulting crust, the underlying tissue is about to heal, leaving only reddened macular or depressed cicatrices to mark the location of the lesion, these cases take upon themselves renewed activity. The underlying tissue does not heal, but takes upon itself an inflamed condition which results in an overgrowth of tissue becoming more or less organized and persistent over a very long period of time. The process is, as a rule, a general one and the site of each original lesion partakes of the general process. Each tumor is, as a rule, somewhat larger than the original pustule. The larger the original pustule the larger the subsequent hypertrophy. The largest reach an elevation of three or four millimeters and a breadth of one centimeter. The tumors are sessile, flattened on the summit, and paler in color than the surrounding skin. They may or may not be umbilicated. They are non-specific as far as smallpox is concerned. In the absence of any pathological or bacteriological investigation as to their nature, of which I have knowledge, conjecture can only be made as to structure of these hypertrophied masses of tissue. They seem to be an overgrowth of granulation tissue covered by a very thin layer of delicately formed skin, indifferently supplied with blood. They do not show a tendency to become permanently organized, though they persist for months. In all the cases of which I have knowledge these hypertrophies gradually diminished and eventually disap-



peared. An application of salicylic acid accelerates the retrograde metamorphism.

None of these hypertrophies, even in the negro, became keloid.

3—*Secondary Infection.* The most interesting of all the sequelæ of smallpox arise from the secondary infections.

It is not seriously disputed by American bacteriologists that smallpox is due to a specific bacteria. What the size, reaction, life history and direct influence on the human body of these microorganisms are is still a profound mystery. The solution can only come with the discovery of the organism and subsequent investigation.\* But something has been learned during this passing epidemic of smallpox which, while it does not reveal the germ itself, explains somewhat the causes of the symptoms associated with it. As a result of thirty autopsies on subjects dead of smallpox by Ewing, and of fifty-two by Councilman, it is certain that an extensive streptococcic infection is the invariable accompaniment of smallpox. Every one of the autopsies showed it. In the thirty autopsies made by Ewing, in every case the heart blood showed the presence of streptococci pyogenes. In other cases streptococci were not always found in the circulating blood. Therefore, while in all cases of smallpox there is a more or less extensive local secondary infection of streptococci, the infection does not necessarily become general. In the autopsied cases there was general infection every time. In the cutaneous lesions in the autopsied cases, streptococci were found in ninety per cent. or twenty-three times out of twenty-seven cases, but Ewing makes the reservation that perhaps a more perfect technique would probably show streptococci present in a much larger number if not all of the cases. It has also been ascertained that the luxuriance of the growth is proportional to the severity of the cases and that the streptococci were most abundant in the primary hæmorrhagic cases of smallpox. All other microorganisms were overshadowed by the streptococci, and the histological lesions depended as a generalization upon this microorganism. Ewing believes that the smallpox germ annihilates resistance to streptococci, and Councilman goes further and states that in his judgment the natural resistance to streptococci is abated for the reason that the bacteria of smallpox produces a destruction of the polynuclear

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\*NOTE.—This paper was written before the announcement of the discovery of the cause of smallpox by Dr. Councilman.

leucocytes of the blood and that their absence removes the barriers to the pathological process.

The destruction of the leucocytes and the development of other conditions, theoretically diminish the physiological resistance of the blood to invading germs, and consequently the streptococci finding no impediment imposed to their progress develop with the greatest rapidity, so that within a few days the site of each smallpox lesion becomes infected with this bacterium, while in fatal cases general infection ultimately occurs. From the time of the secondary invasion of the smallpox lesion by the streptococci Ewing states that the rules governing secondary infection apply. Both Ewing and Councilman agree that the severity of the cases depend upon the extent of the streptococcic infection. Thus Ewing concludes that:

"1—Streptococci overshadow all other infecting organisms present;

"2—Fulminate cases are impossible without the presence of streptococci;"

and Councilman concludes that:

"1—One rarely dies of smallpox *per se*, but from secondary infection;

"2—Death occurs from septicæmia."

If this is true, that the severity of the symptoms in this disease is due to the toxæmia of streptococcic infection, the injection of streptococcic serum might be expected to produce a mitigation of the symptoms, and in some cases avert a fatal issue. In at least one case on record this procedure has been tried. The case was a desperate one, but the injection of the serum was apparently followed by an improvement in the general condition. The patient recovered. Further experimental use of the serum in desperate cases seems justifiable.

The bacteriologists believe that the smallpox bacterium associates itself primarily with the epithelial surfaces. The secondary streptococcus infection appears at the site of each original lesion. Councilman believes that when general infection occurs the entrance is through the mucous membrane. From all this one would infer that the greatest number and variety of lesions would be associated with the epithelial surfaces and the tissues contiguous to them. Such appears to be the fact. I think it was Ewing who said that these lesions are invariably due to streptococci. We may then expect and do find as sequelæ of the disease

conjunctivitis and keratitis, superficial skin abscesses, with or without peripheral enlargement of the original lesion, superficial or deep ulceration of the mouth, pharynx, trachea and respiratory mucosa. The trachea is particularly the seat of ulcerative processes. Lesions of the epithelial surfaces of the œsophagus and other portions of the digestive tract are rarely found. The same is true of the mucosa of the urinary tract. In thirty autopsies Ewing did not find a single bladder lesion. Ptyalism, with enlarged submaxillary, sublingual or parotid glands, with or without suppuration, are common. Swelling and abscess of the lymphatic glands occasionally are found. Diffuse phlegmonous ulceration and abscess of cellular tissues associated with the skin are of common occurrence.

In the thirty autopsies made by Ewing there were three with acute ulcerative endocarditis, two with general scarlatiniform eruption, one with erysipelas.

Bone marrow lesions are occasional, and Councilman states that these lesions are totally different from those obtained in any blood infection.

I have purposely avoided, in this paper, the tedious recital of cases, preferring, in so short a paper, to present a general outline of the more interesting sequelæ of smallpox from the popular rather than the strictly scientific standpoint. In so far as the paper deals with the bacteriology of the disease, dependence must of necessity have been placed upon the reports of the work of specialists along that line. In so far as this paper deals with the clinical manifestations of the disease cases could easily be cited illustrating all the essential statements made. Of the more than two hundred cases occurring in this city only one, so far as I know, still remains under treatment. This is a case of bone infection and abscess beginning about ten months ago. Most of the deaths are to be classed among the hæmorrhagic or malignant forms, and with one exception none have died who succeeded in resisting the streptococcic invasion during the first two weeks of the disease. The exception noticed was of a patient who passed safely through a most severe toxæmia, only to be followed by the appearance of a great number of superficial and deep foci of ulceration of the skin. The original infection occurred in May, 1902, and the patient died in March, 1903.

## Correspondence

### POPULAR ERRORS REGARDING MEDICINE

#### HOW TO CORRECT THEM

CHARLTON, N. Y., *August 9, 1903.*

*To the Editors of the ALBANY MEDICAL ANNALS:*

In these dawning years of the twentieth century the various sciences, once studied only by the few, are now being investigated and comprehended by the many. Superstition is giving place to knowledge; and fiction to fact. The field of medical science has alone been left to the advertising quack and the vendor of nostrums, who have succeeded in establishing in the minds of the laity error where truth should prevail. The cultivation of the wheat of medical science has been neglected and the tares of quackery, charlatanism, and of the various "isms" have been allowed to grow.

Causes and symptoms of disease have been erroneously given, while treatment has been made to conform to these misstatements. In all other branches of science the public has been asking for truth; in medicine, error and falsehood have seemed to satisfy. Exploded theories are related as discoveries, and long ago discarded remedies are claimed to be known only to the great "doctor" whose name a nostrum may bear.

The reasons for this state of affairs are mainly two: The public does not read medical literature; and the lay press, as a rule, does not contain the needed information. The "free" almanac and "health book" of the nostrum manufacturer has had full swing; while untold harm has resulted and millions of dollars have been wasted.

Take the subject of the causes of disease, for example: If it be a "liver" medicine that is advertised, all the ills that flesh is heir to will in this case be traced to a disordered liver. If, on the other hand, a "kidney" medicine is vaunted, the kidneys will be held to blame for the various discomforts of the race. Certain symptoms are claimed as pointing to disease which does not exist, and danger signals are passed over as being harmless. Having noticed some of the conditions which obtain in the popular mind, and the reasons for them, we are led to ask:



What is the remedy? In the first place, the true physician should, in every possible way, disabuse the minds of his patrons of any fallacies which they have been led to believe. He should also, when practical, not allow misstatements regarding his chosen calling to go unchallenged. When a person comes to him and says: "Doctor, I have cut my finger," and has put on this or that "to keep out the cold," the physician should inform the person that it is not "cold" but septic material, usually not floating in the air but existing in the dust of the street, or upon the hands or clothing of the wounded person, which may gain entrance to the system and produce the well-known dangerous condition popularly known as "blood poisoning." The patient who has a pain in the back has been taught to believe that this a sure sign of "Bright's disease." He should be informed that in 99 cases out of 100 pain in the back is not a symptom of kidney trouble. Thus, in a thousand ways, the physician can help to lift the veil that obscures true knowledge. Clergymen, instead of putting their names and titles to patent medicine testimonials, should assist the medical profession in the fight against disease of the body, which in many cases may result in disease of the mind. Local boards of health should distribute literature bearing upon the cause and prevention of disease. This is already being done in some of the large cities. In the matter of contagious and other diseases, the lay press should throw off the yoke of subsidy and publish facts regarding such questions as disinfection, quarantine, vaccination, etc., instead of grasping a straw of fact and trying to make a bundle of it. These are but a few of many suggestions which might be made. These will serve, however, to point the way to the reformation of the medical ideas of the public. When the time comes, as it soon must, when medicine as a science shall be taught as a means for the prevention of disease, the furthering of temperance in all things, of cleanness of body and mind, of truth instead of falsehood, of facts in place of fables, the hope of the true physician will in part have been realized.

I am, etc.,

F. W. ST. JOHN, M. D.

## Editorial

His near neighbor, Farmer Smithwick, adamant bachelor and woman-hater, used to comment on well-nigh every human misfortune with the words, "There's a woman in it." At the sudden death of Mr. Smithwick's best cow, the old doctor ascribed it to a prevalent bovine epidemic and geyed his neighbor sharply when he repeated his pet phrase, "There's a woman in it." A day or two later Mr. Smithwick met the doctor and in triumphant mood. "Doc," quoth he, "we've got yer this time. We cut up that critter to see what ailed her, and found she'd died from a hair-pin in her windpipe."

CLARENCE DEMING.

*An Old-time Country Doctor.*

### THE ALBANY GUILD FOR THE CARE OF THE SICK POOR

#### Special Obstetrical Department

At a meeting of the Executive Committee of the Albany Guild for the Care of the Sick Poor, called on the 19th of June to consider the development of the "Special Obstetrical Department" in connection with the Medical College, with reference to knowing whether it can be made of permanent value to the students, it was the unanimous opinion that the Department should be entirely under the direction of the Guild. In order to clearly define the methods of work as the Guild proposes to carry it on, certain regulations were agreed upon as follows:

Students in the Senior year desiring practical obstetrical experience under the Guild, should register with the Guild for the department and pay a nominal fee of \$3 at present, the list of such students with corresponding fees to be handed to the Chairman of the Special Obstetrical Committee.

The Special Obstetrical Committee should provide a lodging with telephone service for two students on duty, in order that calls for Guild nurses, students and obstetricians may be met with the least possible delay;

The obstetrical bags for the use of students should be properly equipped at the Guild apartment, the special obstetrical supply closet to be there, and sterilizing to be done there by the Guild nurses;

Students should have cases in regular rotation in order of registration;

Cases should be sent directly to the Guild, new cases to be reported by the head nurse at once to obstetrician and students on duty, and to be visited by a graduate nurse;

Cards for distribution should be issued without the name and address of the obstetrician as heretofore, but with the Guild address, telephone numbers and office hours;

When a patient is desired for a clinic, a graduate nurse should make the necessary arrangements with said patient, and present her at the required time and place;

A Guild nurse should be present at an examination of a patient wherever such examination is held.

It can be seen that the methods outlined above are designed to relieve the obstetricians from unnecessary encroachments upon their time; to give as good opportunity for practical knowledge to students as heretofore; and to put the work and financial responsibility upon the Guild as its part, in connection with the Medical College, for the furtherance of the medical proficiency of students along obstetrical lines.

The plan has been heartily endorsed by Dr. Boyd and Dr. Lochner, consulting obstetricians for the Guild, and by Dr. Lipes, the obstetrician in charge.

The Special Obstetrical Department is entering upon its third year of service. In that time the rate of progress has been encouraging. The first year there were sixteen cases, the second year thirty-one, and for eight months of this year there have been twenty-eight cases. This increase seems to give promise for the future that the requisite number of cases will be provided to insure the proper amount of professional work to the students.

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### In Memoriam

WILLIAM WINTHROP BETTS, M. D.

[A Memorial Notice of Dr. Betts was printed in the *ANNALS* for August. Through the courtesy of Dr. WILLARD HENRY FOX, of Los Angeles, and HENRY G. TINSLEY, Esq., of Pomona, Cal., the following additional facts have been obtained, but too late for insertion in the August issue. These reveal the interesting side of the lamented Dr. Betts' character, not previously recorded.]

In Los Angeles, Cal., June 16, 1903, William Winthrop Betts, a graduate of the Albany Medical College, passed to his eternal rest. He had been a sufferer with Bright's disease of the kid-

neys for longer than a dozen years. During long periods he had been incapacitated by disease from practice of his profession, but, possessed of a determined will and unusual physical strength, he would resume his profession when most men similarly afflicted would have given up in despair. He was of genial, sanguine temperament, highly ambitious to make a reputation for himself, and, when he felt that his zeal to become a leader in his profession was frustrated, he accepted his fate manfully and without murmur.

He disliked a whiner, and saw the beauty and joy of life all about him. He was an investigator, and loved to delve, when disease had unfitted him for professional labor, into new scientific fields. Thus he became an authority on the Pacific Coast in climatology, and, even as he lay dying, he was called upon for expert opinions in this branch of therapeutics. During his months of illness, also, he gave time and study to aboriginal archæology in Utah and Arizona, and the letters he received from the Ethnological Bureau at Washington bespeak the eminent service, as an amateur, he was to the Smithsonian authorities.

Last March the disease, with which he had bravely and silently fought during long years, had made such inroads upon him that he was advised to go to the Christian Hospital in Los Angeles. He went there, expecting to once more baffle the progress of disease, but he never again left his room at the hospital. Even to the last he retained his unusual self-possession, never speaking of the nature of his ailment, and seldom referring to his approaching death.

Dr. William Winthrop Betts was born in Chatham Centre, Columbia county, N. Y., in 1862, the eldest son of Charles W. and Louisa Phelps Betts. His father was an eminent civil engineer forty years ago. From his earliest youth William Betts had a thirst for a medical education. After leaving the school in Columbia county he entered a drug store at Valatie, in that county. In 1881 he entered the Albany Medical College, graduating in 1883. For several years he practiced his profession at Valatie, and quickly won a large practice. The rapid growth of Minneapolis was attracting much attention everywhere in 1886, and Dr. Betts, too, caught the enthusiasm for the western city. For five years he was a practitioner in Minneapolis, enjoying a very lucrative practice.

There he observed the earlier signs of Bright's disease within him. A change of climate and environment was advised, and a



little later Dr. Betts removed to Salt Lake, Utah. There for eight years he was a general practitioner. There were months when his growing disease forced him to abandon his office and to go to the mountains or out on the desert for rest and change. In one of these forced exiles from his dearly-loved medical labors he observed the prevalence of a speedily mortal pulmonary disease. His investigative spirit was roused. Studying the matter, he discovered that the victims were among people who lived adjacent to gold quartz mills and that the fine powder to which the quartz is reduced by stamps in the gold extracting process was the cause of a peculiar disease of the lungs. Ill as he was, he gave weeks to investigations along these lines. He examined the lungs of many dead victims of the dust disease and found many new facts. His articles in the medical journals of the East and West had wide attention, and he had enquiries from schools of medicine in Europe. The Utah, Nevada and California legislatures took up Dr. Betts' findings, and made laws compelling mining operators to construct quartz mills along lines proposed by Dr. Betts, so as to obviate the powdered quartz entering the lungs of operatives and near-by residents.

The law is popularly known in Utah and Nevada as the Betts' law for stamp mills. Dr. Betts leaves one brother (a resident of British Columbia) and a host of sorrowful friends wherever he lived.

#### GORTON H. RACE, M.D.

Dr. Gorton H. Race, an alumnus of the Albany Medical College of the Class of 1880, died at his home in Great Barrington, Mass., July 22nd, 1903. He practiced medicine at West Stockbridge, Mass., for several years, and then established himself at Great Barrington. Here he was remarkably successful from the first. The strain of a large practice brought on a very severe sickness some years ago, as a result of which he was incapacitated for active work. He leaves a widow and four children.

#### REUBEN BARNEY, M.D.

Dr. Reuben Barney' of the Class of 1865 of the Albany Medical College, died at his home in Chillicothe, Mo., July 16th, 1903.

## ALLEN R. THOMPSON, M.D.

The sad death of Dr. Allen R. Thompson by suicide occurred on August 22d, 1903. Dr. Thompson had been ill for more than a year and had spent some time at health resorts, seeking restoration. He was at Asbury Park when the deed was committed. He had been in a state of nervous depression and stated to one of his friends that he feared he would become insane.

Dr. Thompson was born at Sandy Creek, Otsego County, and was about forty-five years of age. He was educated in the village of his birth and was graduated from the High School in 1878. He studied medicine with his father, who was also a physician, and attended lectures, first at Washington, D. C., and later at the Albany Medical College, from which he received his degree in 1883. He was interested in dispensary work and established a private dispensary in Troy.

Dr. Thompson was a member of King Solomon's Primitive Lodge, Apollo Chapter, Bloss Council, Apollo Commandery, K. T.; Oriental Temple, Nobles of the Mystic Shrine; Troy Lodge of Elks; Court Troy, Foresters of America; Trojan Wheelmen, Fraternal Mystic Circle, the Exempt Fireman's Association, Read Steamer Company, and the Rensselaer County Medical Association.

Dr. Thompson has shown some interest in politics and was first Police Surgeon in the city of Troy; later he was elected Coroner, which office he held at the time of his death.

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## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF PUBLIC HEALTH — CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JULY, 1903.

### *Deaths*

	1901	1902	1903
Consumption .....	16	17	14
Scarlet Fever.....	0	0	0
Typhoid Fever.....	0	1	0
Diphtheria and Croup.....	1	1	0
Measles .....	0	2	2
Whooping-cough .....	0	1	1

	1901	1902	1903
Erysipelas .....	0	0	1
Cholera Infantum.....	11	17	25
Pneumonia .....	2	4	14
Broncho-pneumonia .....	0	0	1
Cancer .....	6	7	10
Bright's Disease.....	12	7	12
Apoplexy .....	15	4	6
Accidents and violence.....	24	12	12
One year and under.....	34	26	48
Seventy years and over.....	28	19	24

*Death in Institutions*

Albany City Hospital.....	9	12	21
Albany Orphan Asylum.....	1	0	0
County House.....	6	3	7
Home for Aged Men.....	2	0	0
Home for the Friendless.....	1	0	0
Homeopathic Hospital.....	4	3	3
House of Good Shepherd.....	0	1	0
Public Places.....	5	6	7
St. Francis de Sales' Orphan Asylum.....	0	0	3
St. Margaret's House.....	2	3	4
St. Peter's Hospital.....	0	3	3
Total number of deaths.....	142	135	176

	1901	1902	1903
Death rate for July.....	16.06	15.27	20.71
Death rate for July, 1903, less non-residents, 18.13.			

Births at term.....	132
Still births.....	5
Premature births.....	4
Total .....	141
Marriages .....	77

There is a tendency towards a diminution in the number of deaths from tuberculosis to be noticed from year to year, and it is probable that a still further decrease will be noticed in the future as information becomes more widely diffused as to the cause and method and propagation of disease.

The increased death rate for this month is due very largely to the increase in the number of deaths from cholera infantum and from pneumonia. Otherwise, the deaths due to germ infection, and commonly classed as contagious diseases, are practically nothing for a city the size of Albany. The number of deaths set down to cholera infantum is 25, and the total number

due to the digestive disturbances in infants, under one year, and which can be reasonably classed with cholera infantum, was 42. This marked increase is another argument for more vigorous control over the milk supply. The increase in the deaths from pneumonia cannot be easily explained. The deaths from pneumonia and cholera infantum are again practically all classed under the deaths from the extremes of life. Both these have increased in number over the corresponding period last year. There has also been a very large increase in the number of deaths in the City Hospital.

The number of births reported is also satisfactory.

Total number of assignments made.....	77
Total number of calls made.....	166

#### INSPECTIONS.

During the month 51 markets were inspected; 2 violations were found; 2 ice boxes were condemned; 4 fish markets were inspected; 5 fish peddlers; 1 ice wagon; 2 cow stables; 2 vegetable stores and 21 milk peddlers.

In the Bureau of Plumbing, Drainage and Ventilation, 162 inspections were made of which 98 were of old buildings and 64 of new buildings, 38 inspections were made of iron drains, 28 of tile drains, 4 of urinals, 32 of cesspools, 48 of wash basins, 57 of sinks, 42 of bath tubs, 49 of wash trays, 1 of butler's pantry sinks, 1 of trap hopper in yard and 70 of tank closets. 105 permits were issued by the Department, of which 73 were for plumbing, and 32 for building purposes. Seven plans were submitted, of which 5 were of old buildings and 2 of new buildings. Twenty-one houses were tested on complaint; 14 by the blue and red test and 7 by peppermint test. Twenty-one water tests were made. Thirty-one houses were examined on complaint and 17 were re-examined.

In the Bureau of Sanitation, 68 complaints were made and 74 inspections were made, and 37 reinspections. Complaints were made of 8 privies, 11 closets, 2 drains, 9 plumbing nuisances, 9 water nuisances, 1 filthy yard, 1 filthy alley, 10 filthy premises, 1 filthy vacant lot, 2 manure, 2 fish, 3 garbage and 2 stagnant water nuisances. Twenty-three complaints were found without cause and 19 nuisances on reinspection were found to be abated. Four complaints were referred to the Commissioner of Public Safety and 2 to the Commissioner of Public Works. Thirty-two notices were served.

#### CONTAGIOUS DISEASE.

##### *Cases Reported*

	1901	1902	1903
Typhoid Fever.....	4	9	3
Scarlet Fever.....	4	4	7
Diphtheria and Croup.....	10	16	13
Chicken-pox .....	2	4	1
Measles .....	27	7	38
Whooping-cough .....	2	0	0
Consumption .....	1	0	1



## Fumigations:

Houses.....	20	Rooms.....	52
Number of days quarantine for diphtheria:			
Longest.....	33	Shortest.....	4
Average.....	16		
Number of days quarantine for scarlet fever:			
Longest.....	61	Shortest.....	29
Average.....	43¾		

## ANTITOXIN.

Cases of diphtheria reported.....	13
Cases in which antitoxin was used.....	12
Cases in which antitoxin was not used.....	1

## BENDER LABORATORY REPORT.

## Cultures for diphtheria:

Initial positive.....	10
Initial negative.....	15
Release positive.....	10
Release negative.....	12
Failed .....	2

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Total number of cultures.....	49
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## CAUSES OF DEATH OF CHILDREN UNDER FIVE YEARS OF AGE.

Age.	Chief Cause.	Contributing Cause.
2 months .....	Malnutrition .....	
4 months .....	Pneumonia .....	
5 months .....	Erysipelas, Broncho- pneumonia .....	
6 months .....	Cholera Infantum.....	
2 months .....	Ileo-colitis .....	
2 months .....	Cholera Infantum.....	Heart Collapse.
9 months .....	Cholera Infantum.....	
1 month .....	Exhaustion .....	Gastritis.
1 month .....	Indigestion and Spasms.....	
3 months .....	Pneumonia .....	
8 months .....	Marasmus .....	
4 months .....	Inanition .....	
1 year .....	Convulsions .....	Heat, Gastric Irritation.
5 months .....	Meningitis .....	Cholera Infantum.
1 year, 5 months.....	Cholera Infantum.....	Heat, Exhaustion.
1 month .....	Inanition .....	
2 days .....	Marasmus .....	
7 months .....	Cholera Infantum.....	
2 months .....	Marasmus .....	
7 months .....	Enterocolitis .....	
11 months .....	Infantile Convulsions..	Acute Enteritis.
4 months .....	Cholera Infantum.....	Marasmus.
3 months .....	Asphyxia .....	Suffocated in bed.
4 months .....	Pneumonia .....	
2 months .....	Tuberc. Enteritis.....	
11 months .....	Pneumonia .....	Measles.
10 months .....	Meningitis .....	Convulsions.
3 months .....	Capillary Bronchitis .....	

<i>Age.</i>	<i>Chief Cause.</i>	<i>Contributing Cause.</i>
8 months .....	Entero-colitis .....	Marasmus.
6 months .....	Gastro-enteritis .....	.....
7 months .....	Cholera Infantum.....	.....
3 months .....	Cholera Infantum.....	.....
2 months .....	Cholera Infantum.....	Shock .....
4 months .....	Cholera Infantum.....	.....
3 months .....	Malnutrition .....	.....
4 months .....	Marasmus .....	Infantile Indigestion.
2 months .....	Marasmus .....	Malnutrition.
9 days .....	Cyanosis .....	.....
1 month .....	Milk Infection.....	Diarrhoea.
9 months .....	Cholera Infantum.....	.....
1 year, 7 months.....	Cholera Infantum.....	.....
1 year, 6 months.....	Entero-colitis .....	.....
11 months .....	Convulsions .....	Measles.
2 years, 6 months....	Convulsions .....	Pertussis.
7 months .....	Gastro-enteritis .....	.....
1 year, 10 months....	Convulsions .....	Entero-colitis.
3 months .....	Cholera Infantum.....	Asthenia.
4 months .....	Infantile Convulsions..	Cholera Infantum.
1 month .....	Cholera Infantum.....	.....
4 months .....	Septicaemia .....	Otitis Media.
5 months .....	Acute Pulmonary Oe- dema .....	.....
4 months .....	Cholera Infantum.....	.....
3 months .....	Heat Exhaustion.....	.....
3 months .....	Malnutrition .....	.....

## Medical News

Edited by Eugene E. Hinman, M. D.

ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE.—On July 1st, copies of the report of the proceedings of the last annual meeting were mailed to all alumni whose addresses are known, and it is desired that any alumni who have not received the reports notify the Secretary of the Alumni Association.

The following list of changes in addresses is made up from the notices from postmasters, and the Secretary will be glad to be notified if any are now incorrect in order to correct the mailing list of the Association.

*The following are said to be correct addresses:*

- Dr. C. D. VROOMAN (A. M. C. '92), Ellenville, N. Y.
- Dr. H. A. BRYANT (A. M. C. '98), Schenectady, N. Y.
- Dr. W. W. PALMER (A. M. C. '55), Erie, Pa.
- Dr. G. E. PAUL (A. M. C. '69), Granville, N. Y.
- Dr. E. F. HALE (A. M. C. '75), Bristol, R. I.
- Dr. W. O. CARPENTER (A. M. C. '98), Medway, N. Y.
- Dr. W. B. FISH (A. M. C. '79), Lincoln, Ill.
- Dr. L. A. VAN WAGNER (A. M. C. '68), Sherburne, N. Y.
- Dr. J. R. MOHAN (A. M. C. '94), Detroit, Mich.
- Dr. L. VAN HOESEN (A. M. C. '93), Hudson, N. Y.
- Dr. E. B. WELLS (A. M. C. '98), Findlay, Ohio.

- Dr. E. L. ENSIGN (A. M. C. '56), Erieville, N. Y.  
 Dr. C. J. SLOCUM (A. M. C. '97), Utica, N. Y.  
 Dr. F. T. CLARK (A. M. C. '96), Westfield, Mass.

*The following addresses are unknown:*

- Dr. G. H. BEEBE (A. M. C. '94), last known address, Salisbury, Conn.  
 Dr. M. SHELDON (A. M. C. '93), last known address, Ancram, N. Y.  
 Dr. P. J. BARRETT (A. M. C. '92), last known address, Utica, N. Y.  
 Dr. H. A. BURTON (A. M. C. '92), last known address, Philadelphia, Pa.  
 Dr. H. W. BROWN (A. M. C. '89), last known address, Binghamton, N. Y.  
 Dr. T. C. WHITE (A. M. C. '59), last known address, Rochester, N. Y.  
 Dr. A. J. BILLINGS (A. M. C. '54), last known address, Freedom, Me.

*The following are said to have died:*

- Dr. F. D. L. MANDEVILLE (A. M. C. '77), Binghamton, N. Y.  
 Dr. M. TYGERT (A. M. C. '79), Jeffersonville, N. Y.

ALBANY MEDICAL COLLEGE, OPENING SESSION.—The regular winter session of the Medical College will begin Tuesday, September 22d. Lectures, recitations and clinics will be resumed very promptly after the annual opening address by a member of the faculty to be announced later.

ALBANY COLLEGE OF PHARMACY, OPENING SESSION.—The twenty-third session of the College of Pharmacy will open on Monday, October 5, 1903. The exercises of this college are held in the Albany Medical College building and in the Pharmaceutical Laboratory on Maiden Lane.

PRACTICAL CLINICAL COURSES.—With the greatly improved facilities at the new City Hospital and those soon to be available at St. Peter's Hospital, the Albany Medical College will be particularly well equipped for giving excellent clinical instruction to its students. In order to familiarize students with the practical work of their profession, and to bring them into closer personal contact with patients, the fourth year class is divided into sections of eight or ten men, and on four days in each week each man devotes several hours to the examination and personal observation, under the supervision of the instructors, of patients in the wards and out-patient departments of the various hospitals and dispensaries. In this clinical work especial attention is devoted to the complete examination of the blood, urine, sputum and stomach contents, as well as to the special examination of the eye, ear and other organs. Thus in the course of the school year the men in each section acquire practical knowledge and technical diagnostic dexterity in general medicine, general surgery, dermatology, neurology, insanity, otology, laryngology, ophthalmology, rhinology, diseases of children and infants, infant feeding, diseases of the rectum and genito-urinary tract, operative surgery, orthopedic surgery, operative obstetrics, electro-therapeutics and medical technique.

The following table shows the ground covered by the clinics for Junior and Senior students:

*Combined Third and Fourth Year Classes.*

Wednesday—10 A. M. (Medicine), Prof. Hun; 11 A. M. (Surgery), Prof. Morrow. Thursday—10 A. M. (Gynecology), Prof. Boyd. Friday—5 P. M. (Neurology), Prof. Hun. Saturday—10 A. M. (Medicine), Prof. Ward; 11 A. M. (Surgery), Profs. Vander Veer and Morrow.

*Fourth Year Class Divided into Sections.*

Monday—11 A. M. to 1 P. M. (Ophthalmology), Prof. Merrill; (Dermatology), Prof. Curtis; 3 P. M. to 5 P. M. (Insanity and Electricity), Dr. Mosher; (Pediatrics and Obstetrics), Drs. Shaw and Lipes; (Surgery), Dr. Elting. Tuesday—11 A. M. to 1 P. M. (Laryngology), Dr. Theisen; (Otology), Dr. Bendell; (Neurology), Dr. Mosher; 3 P. M. to 5 P. M. (Pediatrics), Dr. Shaw; (Orthopedics), Prof. Morrow; (Medicine), Dr. Laird. Thursday—11 A. M. to 1 P. M. (Dermatology), Prof. Curtis; (Laryngology), Dr. Root; 3 P. M. to 5 P. M. (Medicine), Drs. MacFarlane, Neuman, Mosher and Shaw; (Surgery), Dr. Elting. Friday—11 A. M. to 1 P. M. (Ophthalmology), Prof. Merrill; (Neurology), Dr. Mosher; (Genito-Urinary), Dr. Sautter; 3 P. M. to 5 P. M. (Therapeutics), Prof. Van Rensselaer; (Medicine), Drs. MacFarlane, Neuman and Shaw; (Surgery), Dr. Elting.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR JULY 1903.—Number of new cases, 75. *Classification of Cases*: District cases reported by health physicians, 10; Charity cases reported by other physicians, 35; moderate income patients, 30; old cases still under treatment, 16. *Classification of Diseases* (new cases): Medical, 16; surgical, 5; gynaecological, 3; obstetrical, 25 mothers and 25 infants under professional care; eye and ear, 1; transferred to hospitals, 4; deaths, 5.

*Special Obstetrical Department*: Head obstetrician in charge of all cases; medical students in attendance, 4; Guild nurses, 3; cases, 3. Number of visits by obstetrician, 6; by assistant obstetrician, 5; by medical students, 26; by Guild nurses, 29; total number of visits for this department, 66.

*Visits of Guild Nurses* (all departments): Number of visits with nursing treatment, 767; for professional supervision of convalescents, 146; total, 913; visits were made by three graduate nurses and one assistant nurse.

IMPROVEMENTS AT BELLEVUE HOSPITAL.—Among a number of improvements recently made in the management of Bellevue Hospital, New York City, none are more important than those in the Insane Pavilion. The trustees have appointed Dr. F. Packer, resident physician, and have given him two assistants, Dr. M. S. Gregory and Dr. D. C. MacClymont, all of whom have had experience in the care of the insane. Drs. Packer and Gregory are both graduates of the Albany Medical College. A system of hospital treatment has been adopted so that all cases are given the benefit of the same service as in a general hospital for the insane.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—The thirteenth annual convention of this Association will meet at Hotel Windsor, Atlantic City, N. J., on September 22, 23 and 24, 1903. The preliminary programme shows that a large number of very interesting and valuable papers, covering this important branch of medical work, will be read and discussed.



AMERICAN CONGRESS ON TUBERCULOSIS.—This Congress will assemble in Washington, D. C., April 4, 5 and 6, 1905. It is announced that Dr. Alfred Meyer, of New York City, who is a prominent specialist in this department, has been appointed chairman of a committee in charge of the Section on Sanitarium Treatment of Tuberculosis.

FOURTH STATE CONFERENCE OF CHARITIES AND CORRECTIONS.—Contributions are needed at once to meet the expenses of the Fourth New York State Conference of Charities and Corrections, which will be held in Buffalo, November 17 to 20, 1903.

As the constitution of the conference does not allow a membership fee, the necessary expenses must be met wholly by voluntary contributions.

The great usefulness of this annual conference has been demonstrated, and it is hoped that the individuals, societies and institutions to which this letter is addressed will respond promptly with subscriptions. The money should be sent to Mr. Frank Tucker, Treasurer, 105 East Twenty-second street, New York City.

A CHANGE IN A MEDICAL JOURNAL.—On and after the first day of October, 1903, the Medical Publishing Company of America, which has acquired from the Medical Critic Publishing Company all of its rights and interests in the *Medical Critic* will publish and present to the profession *The Daily Medical Journal*, as well as the monthly *Medical Critic*.

STATE AND COUNTY CIVIL SERVICE EXAMINATIONS.—The next general examination for the state and county service will be held on September 12, 1903. These examinations include the positions of nurses and physician, male and female, in several state and county hospitals. All desiring to enter these examinations must file applications in the office of the State Civil Service Commission in Albany, before noon of September 7th. Application blanks and information may be obtained by addressing the Chief Examiner.

PERSONAL.—Dr. M. S. GREGORY (A. M. C. '98), who has been junior physician at the Long Island State Hospital has been lately appointed assistant physician in the Insane Pavilion, Bellevue Hospital.

—Dr. F. PACKER (A. M. C. '93), has been appointed to the post of resident physician, Insane Pavilion, Bellevue Hospital.

—Dr. H. A. LA MOURE (A. M. C. 1900), has been transferred from Craig Colony to the State Custodial Asylum at Rome, N. Y.

—Dr. M. J. MANDELBAUM (A. M. C. '02), is practicing at Berne, N. Y.

—Dr. R. S. MOSCRIP (A. M. C. '99), is located at Grand Gorge, N. Y.

—Dr. R. A. GRANT (A. M. C. '93), has removed to 3186 Pawtucket avenue, East Providence, R. I.

—Dr. W. H. FOX (A. M. C. '88), is located at 1008 East Twenty-fifth street, Los Angeles, Cal.

—Dr. G. F. GARDNER (A. M. C. '78), is located at Ellisburg, N. Y.

MARRIED.—MASON—VISCHER.—Dr. E. A. MASON (A. M. C. '02), of Grafton, N. Y., and Miss Mary Vischer of Rensselaer, N. Y., were married at the bride's home, June 24, 1903.

MARRIED.—DEVENY—MAYNES.—Dr. T. E. DEVENY (A. M. C. '01), of Watervliet, N. Y., and Miss M. T. A. Maynes, also of Watervliet, were married recently.

## Book Reviews

*International Clinics.* A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by A. O. J. KELLY, A. M., M. D., Philadelphia, U. S. A. With the collaboration of Wm. Osler, M. D., Baltimore; John H. Musser, M. D., Philadelphia; Jas. Stewart, M. D., Montreal; John B. Murphy, M. D., Chicago; Thomas M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh; John Harold, M. D., London; Edmund Landolt, M. D., Paris, and Richard Kretz, M. D., Vienna. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume I, Thirteenth Series, 1903. Philadelphia: J. B. Lippincott Company, 1903.

Several changes have been made in the editorial staff of this admirable quarterly. Dr. A. O. J. Kelly succeeds Dr. Henry W. Cattell as editor and there are five new collaborateurs, Dr. Wm. Osler, Dr. John H. Musser, Dr. Jas. Stewart, Dr. John G. Clark and Dr. Richard Kretz.

In the section on treatment there are five articles of unusual interest, the first of which is a clinical lecture by Dr. Wm. Osler on "Aneurism of the Descending Thoracic Aorta." Though placed in the section devoted to treatment, the lecture deals largely with diagnosis which is treated in a masterly manner. The treatment of the condition is largely palliative in Dr. Osler's experience for he has not seen any cures by the use of gelatin and none of his cases have seemed suitable for wiring and electrolysis by Finney's method. An appendix contains the condensed histories of the fourteen cases which have been observed at the Johns Hopkins Hospital. In "Manheim Methods in Chronic Heart Disease with American Adaptations," Dr. Thomas E. Satterthwait gives the exact details which are essential to the successful application of these methods at home. The most important resistive movements are described and illustrated and the formulæ for the preparation of the baths at different stages in the course of treatment are given. Ernest Finger, M. D., contributes an article on "The Treatment of Chronic Urethritis" which contains the injunction not to allow marriage while there are either gonococci, pus corpuscles or peri-urethral complications.

In the section on medicine there is a report of a clinical lecture on "Pyloric Obstruction, Gastric Dilatation, and Gastric Stagnation," by Dr. Max Einhorn, in which he states that in his experience the mortality rate in operations for this condition is twenty-five per cent. He does not recommend operation in benignant obstruction unless the stenosis is progressive.

In the surgical section three operations are reported from the clinic of Dr. William W. Keen and the statement is made that in the extirpation

of carcinoma of the rectum Dr. Keen prefers to make an artificial anus so that he can completely close the perineal wound. In the report of a clinic held by Dr. Nicholas Senn there appears an account of a new operation for internal hydrocephalus devised by Dr. Senn, consisting of subcutaneous drainage. The method has been employed in one case and, though the child died two weeks after the operation, the head had diminished in size and the body had increased. In a clinical lecture on "The Enduring Results of Total Bilateral Resection of the Cervical Sympathetic in Basedow's Disease" Dr. Thomas Jonnesco reports the histories of three cases previously operated on by his method. In all three the symptoms had practically disappeared and the patients considered themselves well after periods of four, five and, in one case, nearly six years. Dr. Jonnesco considers the operation much safer than even partial thyroidectomy and gets better curative results.

Ill-fitting shoes and acute articular rheumatism are two of the important predisposing causes of flat foot according to Dr. A. R. Shands in his article in the section on orthopedics. The most important treatment is prophylaxis and the recognition and relief of the weak foot before it becomes the flat foot.

In "Functional Reversion and its Import in Medical Practice," Dr. A. F. A. King shows that men sometimes need to revert to the environment of their remote ancestors and he tries to establish a relationship between the effects of some of the most useful drugs and the conditions surrounding our progenitors.

Ninety pages are given to "Progress of Medicine during the Year 1902" by Edward Willard Watson, M. D., and Henry W. Cattell, M. D. While this article is much condensed, it includes the most important topics of the year and contains references to many journals and some excellent illustrations.

R. G. C.

*A Text-Book of Surgery.* For Students and Practitioners. By GEORGE EMERSON BREWER, A. M., M. D., Lecturer on Clinical Surgery at the College of Physicians and Surgeons, Columbia University, New York; Attending Surgeon to the City Hospital; Junior Surgeon to the Roosevelt Hospital; Consulting Surgeon to the Perth Amboy Hospital; Fellow of the American Surgical Association, of the American Association of Genito-Urinary Surgeons, and of the Society of American Anatomists; Member of the New York Academy of Medicine, and of the New York Surgical Society; Membre Correspondent de l'Association Française d'Urologie. Illustrated with 280 Engravings in the Text, and seven Plates in Colors and Monochrome. Lea Brothers & Co., New York and Philadelphia, 1903.

At the present time there are so few text-books on surgery adapted alike for the use of student and practitioner, one cannot fail to be delighted with this volume, dealing, as it does, with each subject in perfectly clean-cut sentences. It is a model of concise expression and is certain to prove very valuable in our medical schools and colleges. Every

practicing surgeon will be pleased to recommend it to his students, because of the actual, beneficial help it will be to them.

The illustrations have been selected with peculiar fitness worthy the endorsement of all practical surgeons, and make the text very clear and impressive.

Taking it as a whole, without specifying as to particular subjects treated, it can be said to embody just the information so much sought after, alike by student and surgeon, and is bound to be a popular book, because of its real, intrinsic value.

A. V.

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## Current Medical Literature

### SURGERY

Edited by A. Vander Veer, M. D.

*Castration in Tuberculosis of the Testicle. (Zur Castration bei Hoden-tuberculose.)*

LUDWIG BERGER. *Archiv für klinische Chirurgie, Band LXVII, Heft IV.*

As is well known, there has been a decided tendency in recent times toward the conservative treatment of tuberculosis of the testicle. Inasmuch as the arguments for both the radical and the conservative treatment have been based, for the most part, upon theoretical grounds, a definite solution of the question has not been reached, as evidenced by the fact that both methods have very ardent supporters.

Baumgarten and Kramer have shown both by autopsy and experiments on animals that tuberculosis of the testicle may be the primary and only tuberculous lesion in the body. The earlier view that tuberculosis of the testicle was always a secondary infection, was overthrown when Baumgarten readily produced infection of the bladder and prostate from the urethra, but was unable to produce infection of the vas deferens and testicle. Baumgarten on the other hand, showed that the infection frequently extended from the testicle to the prostate and neighboring organs, but that it did not extend from the prostate to the testicle upon the other side.

The tubercle bacilli tend to travel in the direction of the currents of blood, lymph and secretions.

Baumgarten's investigations were strongly substantiated by the clinical statistics of Bruns and Simon, whose results, after years of careful observation, completely justified the radical attitude in regard to the treatment of tuberculosis of the testicle.

The opponents of the radical method laid the most stress upon the general treatment of the patient with baths, hygiene, diet, etc., with occasional excision of the tuberculous focus.

The writer presents a careful study of the cases treated in the St. Lazarus Hospital at Krakau, from 1875 to 1900. Prof. Trzebicky, who is at the head of the surgical clinic, advises the trial of the conservative treatment in the beginning of tuberculosis of the testicle, recommending especially baths. If, however, the patient does not show evidences of improvement, radical operation is resorted to. In the past twenty-five



years, fifty patients with tuberculosis of the testicle, or epididymis, have been treated at this Hospital. One-half of these cases occurred in individuals between twenty and forty years of age. In seven of the fifty cases there was an hereditary tendency to tuberculosis, while in twelve there was tuberculosis of other organs, ten of the lungs and two of the kidneys and bladder. In four of the cases the disease followed an old gonorrhea, in nine of the cases contusion was believed to have been of etiological importance. In ten of the cases the disease was bilateral, while in the other forty it was unilateral. In five of the nine cases the disease began simultaneously in both organs, while in four the second testicle became affected from four to fifteen months after the appearance of the disease in the first. In thirty-five cases unilateral castration was performed, in nine cases bilateral castration, in three cases excision of the focus of tuberculosis, while three refused operation. The clinical picture varied from the ordinary induration and tumor formation to tuberculous fistulæ and ulcers. The ultimate result was traced in forty-seven of the fifty cases. Of these forty-seven cases twenty-nine are at present perfectly well, fourteen have died, while four present evidences of tuberculosis in some other part of the body. In forty-three cases in which unilateral or bilateral castration was done, twenty-six are still well, a percentage of 60.4.

The writer believes that while these statistics may not solve entirely the problem, they certainly speak in favor of the radical method of treatment.

*The Treatment of Multiple Tuberculous Stenoses of the Small Intestine.*  
(*Die Behandlung der multiplen tuberkulösen Dünndarmstenosen.*)

LOTHERISSEN. *Wiener medicinische Wochenschrift*, No. 4, 1903.

Cases of multiple stricture of the intestine are largely due to tuberculous processes. Of the 81 cases collected by Reach, 62 per cent were due to tuberculosis. Tuffier divides tuberculosis of the small intestine causing stenosis, into three groups: (1) the genuine cicatricial forms, which result from healed ulcers; (2) the fibrous forms, in which the tuberculous process in the submucous tissue leads to atrophy, and (3) the hypertrophic forms, in which an infiltration occurs at first, and to which is added a reactive inflammatory condition due to intestinal obstruction. This is the rarest form.

Statistics prove that the lowest part of the small intestine is most frequently involved,—that is the ileum and neighboring portion of the jejunum. In rare cases, only the upper part of the jejunum is involved (as in the case of Mikulicz).

Women suffer from this condition more frequently than men, about in the proportion of 2 to 1. Most patients are between 20 and 40 years of age. Very often the tuberculous stenosis of the intestine is secondary to a tuberculous process localized somewhere else, but often it is not possible to find a tuberculous process in any other part of the body. As a rule, only the symptoms of a chronic intestinal stenosis are present,—that is more or less distention, and increased peristalsis. Only very rarely can a diagnosis of multiple stenosis be made, and then only when a number of tumors can be felt. In considering the treatment of this condition,

the author states that most authors at the present time are in favor of the operative method. In the cases of chronic stenosis, internal medical treatment may be tried for several days, but as Nothnagel says, "bloodless methods when employed should be tried within one or two days, because later the outlook for successful operative interference is not so favorable." The operation, which can only be a laparotomy, will sometimes show that the disease, tuberculosis, or perhaps carcinoma, is too extensive for a radical procedure. In such cases, the operator must be content with a diagnostic incision. Even this incision, if the process is tuberculous, is often followed by improvement in the patient's condition, as proved by the cases reported by Boiffin, Rotter, and König. Strehl was able to prove at autopsy, that the stricture, in a case in which von Eiselsberg had performed an entero-anastomosis 11 days before, had become wider. After the irritating intestinal contents are removed, the acute inflammatory swelling may subside, just as impermeable œsophageal strictures often become more patulous several days after a gastrostomy is performed.

The author reports two cases in both of which median laparotomy and entero-anastomosis were performed. The one patient made a perfect recovery, the other dying the day of the operation. In the case that recovered, there was found at the operation, twelve tumor-like infiltrations, nine of which formed round strictures, situated about twenty-five centimeters above the ileo-cæcal valve. In the second case, a tumor-like stenosis was found about 150 centimeters above the ileo-cæcal valve, and three centimeters above the valve a small infiltration of the intestinal wall. The wall of the cæcum was much infiltrated, the lumen being much narrowed. Another stricture was found in the hepatic flexure of the colon. The process was tuberculous in both cases.

The author, in conclusion, states that according to the statistics, up to that time thirty-seven operations had been performed for multiple strictures of the intestines, exclusive of neoplasms. Only four of these were not of a tuberculous nature. Some of the patients were in such a miserable condition that only an artificial anus could be established. These patients soon died. In a few other cases, only the exploratory incision was made. Deducting these cases, 32 radical operations are left, with seven deaths. Resection was performed 17 times, with three deaths, which could all be attributed to errors in technique. In 14 cases, entero-anastomosis was performed, with four deaths.

## NEUROLOGY

Edited by Henry Hun, M. D.

*On Changes in the Central Nervous System in the Neuritic Disorders of Chronic Alcoholism.*

COLE. *Brain, Autumn, 1902, p. 326.*

The author states that it is a well-known fact that in alcoholic paralysis, as in other forms of toxic neuritis, degeneration of the peripheral nerves does not stand alone, but is associated with a more or less characteristic type of change in the related nerve cells. In recent years, observations have been reported which tend to show that this combination of fiber

degeneration with cell change is, at least in many acute cases of the disease, not confined to neurons which go to make up peripheral nerves, but affects neurons of various groups situated entirely within the brain and cord. The disease is a very wide-spread affection of the whole nervous system rather than a mere peripheral neuritis. Few pathologists now hold that alcoholic neuritis consists in an inflammatory affection of the nerves. It is essentially a degeneration of the nerve fibres, the appearances resembling those seen in early stages of Wallerian degeneration after nerve section. There is severe degeneration (acute) of the fibres in spite of complete absence of change in the sheaths, connective tissue and vessels. Indeed the more severe the degeneration, the more striking is the absence of vascular and interstitial changes. These cannot, therefore, be the cause of the fibre degeneration; those cases in which such changes occur must be regarded as secondary, for proliferation of neurilemma nuclei, and connective tissue cells, diapedesis of leucocytes and formation of new fibrous tissue, all appear in Wallerian degeneration.

The author reports three cases:

*Case 1.*—The case was one of acute alcoholic paralysis, ending fatally after six weeks duration and presenting all the usual clinical and pathological evidence of acute degeneration of the cranial and spinal nerves with polyneuritic mental disorder. Death was due to vagus paralysis. There were no vascular changes in the nervous system. There were acute cell changes in the cord, spinal ganglia, medulla and cortex, also degeneration of the pyramidal tracts, fronto-thalamic fibres, and exogenous fibres of the posterior columns.

*Case 2.*—A case of subacute alcoholic delirium following fracture of the femur, ending fatally after ten weeks' duration. Vascular degeneration was slight in the cortex, but severe and accompanied with thrombosis and hæmorrhages, in the cord, medulla and pons. Fibrotic atrophy of the tibial nerves was marked. There were changes in the spinal ganglia with degeneration of the posterior columns. There were also lesions in the anterior corneal cells with degeneration of Clark's cells and direct cerebellar tract. The brain showed cortical cell lesions with pyramidal and cortico-thalamic fibre degeneration.

*Case 3.*—A case of acute alcoholic mental confusion of a polyneuritic type with chronic nephritis and tuberculosis of the lungs. Changes were found in the cortical cells with degeneration of the fronto-thalamic fibres, pyramidal tracts and posterior columns.

From a careful study of the pathological changes observed in these three cases, the author draws the following conclusions:

1. That the peripheral and central lesions express a nervous degeneration, of toxic origin, in the production of which no essential part is played by changes in interstitial tissues supporting the nervous structures, or by changes in the blood vessels concerned with their nutrition.

2. The changes in the nerve cells are not the mere result of antecedent damage of nerve fibres, but the changes in the fibres and cells together, express a highly selective affection of whole neurones.

3. The peripheral neuritis is simply a local expression of this affection, and is not of purely local and peripheral causation.



4. The lesion of the peripheral neurones is only one of the many manifestations of the disease, and is accompanied by lesions similar in character in many of the neurones situated entirely within the central nervous system.

5. The central changes are not attributable to the peripheral neuritis, and in some cases the peripheral neurones are mainly affected, in others the morbid process chiefly implicates central neurones. These two groups of cases do not appear to be sharply divided.

*The Anomalies of the Reflexes (Particularly the Patellar Reflex) and the Associated Sensations (Uncomfortable Feelings and Emotions) in Cases of the Neuroses. (Ueber die Anomalien der Reflexe (insbesondere des Patellarreflexes) und die sie begleitenden Sensationen (Unlustgefühle und Affecte) in Fällen von Neurosen.)*

ST. SZUMAN. *Archiv für Psychiatrie und Nervenkrankheiten*, xxxvi, 2, 1902.

The writer directs attention to certain anomalies of the reflexes associated with the neuroses, in which symptoms of this nature have generally been disregarded. The pronounced changes of organic disease are not shown, but certain valuable modifications in quantitative and qualitative character are shown in relation to the general state of the organism. In health differences are noted in rest, excitement, fatigue, weakness, etc., and the associated symptoms as tremors, spasms and different sensations are worthy of study. The literature is reviewed of the state of the reflexes in epilepsy, tetany, chorea minor, paramyoclonus multiplex, myotonia congenita, hysteria and neurasthenia. The author reports in addition some observations of his own. In a case of hysteria, a tap upon the ligamentum patellæ induced a sharp contraction of the quadriceps extensor, sufficient to elevate the limb, and associated with this was a contraction of the corresponding muscles of the other limb of the abdominal muscles, the pectorals, and certain muscles of the upper extremity. The contractions of the muscles of the lower limbs were of the nature of clonic spasm, while those of the upper limb and the thorax consisted of fibrillary and fascicular vibrations. At the instant of the eliciting of the patellar reflex, mimetic movements of the face occurred, which rapidly took on an expression of anxiety, intensified into fear. The patient also complained that the reflexes caused an unpleasant sensation which rapidly assumed the character of a feeling of anxiety.

Other similar observations in hysteria, nervousness and neurasthenia lead to the following conclusions:

1. The oscillations produced by a blow in the "reflexogenous zone" of the patellar reflex, cause not only muscle and bone phenomena, but induce at the same time uncomfortable sensations (tickling of an unpleasant nature, not to be more definitely described), as well as emotions (astonishment, anxiety, terror, horror).

2. Connection between the physical irritation (a blow upon the reflexogenous region) and a psychic trauma through association and preceding memories was not observed in the cases under examination. The possibility of such in other cases (especially hysteria) appears not to be im-



possible. Examinations in the hypnotic state might give further information upon this.

3. The emotions mentioned are projected upon the face of the patient, and occasionally upon the entire body, these expressions in some cases showing plainly the feeling and in other cases not revealing so distinctly the subjective mental impressions.

4. In some cases the quantitative and qualitative differences of the reflexes were dependent upon the condition of rest, irritability, apathy or mental depression, corresponding with the outspoken psychopathic state: increased or diminished irritability, depending upon the condition of the reflex arc, or the higher inhibiting influences of the cerebro-spinal paths.

### ORTHOPEDIC SURGERY

Edited by Arthur W. Elting, M. D.

*The Operative Reparation of the Paralyzed Quadriceps Femoris. (Der operative Ersatz des gelähmten Quadriceps Femoris.)*

MAGNUS. *Muenchener medicinische Wochenschrift*, October 14, 1902.

There have been comparatively few cases reported in which tendon transplantation has been successfully performed for the relief of a paralysis of the quadriceps extensor muscle. Lange has reported a few successful cases in which he made so-called silk tendons, and thus attached the tendons of certain of the flexor muscles of the thigh to the tuberosity of the tibia. Krause has proposed a somewhat complicated method in which he uses the biceps, semi-membranosus, semi-tendinosus, gracilis and sartorius. These muscles are drawn through a hole in the middle of the vastus internus and their tendons are attached to the edge of the patella.

The writer describes a new method used by Schanz, which is as follows: An incision fifteen centimetres long is made in the median line of the anterior surface of the thigh, beginning at the patella and extending upward, through which the tendon of the quadriceps and the patella are exposed. Another incision is made through the middle of the popliteal space and extending well up the thigh. Through this incision the sartorius is separated from its attachment, and isolated for about one-third of its course. The biceps is treated similarly. By blunt dissection an aperture is now made from the anterior to the posterior incisions, and through these openings the sartorius and biceps are drawn to the anterior side of the leg, one on either side. The tendon of the quadriceps is then perforated just above the patella, and the sartorius and biceps drawn through this opening and sutured firmly to the tendon. The sutures used are of silver or aluminum bronze. The wounds are closed without drainage and the leg kept in plaster of Paris which embraces the pelvis for six weeks, after which active and passive motions, as well as electricity, are used.

The writer reports four cases in children from 7 to 12 years of age in which this operation was done with most excellent results, the patients being able to extend the leg well and to walk without difficulty. The fact so frequently emphasized that the sartorius is frequently paralyzed along with the quadriceps extensor has not in the writer's experience been verified.

# ALBANY MEDICAL ANNALS

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## Original Communications

### ACUTE ULCERATIVE ENDOCARDITIS.

*The President's Address, Delivered before the Medical Society of the County of Albany, May 1, 1903.*

By SAMUEL B. WARD, M. D.,

Professor of Theory and Practice of Medicine and Hygiene, Albany Medical College.

*Gentlemen of the Albany County Medical Society:*

It is a time-honored custom of this society, that at its annual meeting the retiring President should address you on some topic of professional interest. Before doing so, I wish to thank you again for the honor you did me in selecting me as your presiding officer for the past year, and for your uniform courtesy to me on all occasions. The monthly meetings have been held with entire regularity; papers of interest and importance have been read and discussed at each meeting; the attendance has been rather unusually large; and all will, I think, admit that the winter has been a profitable one to all those who availed themselves of the opportunity of attending. Allow me to add that this success is due in large measure to the indefatigable efforts of our retiring Secretary.

During the past year two very interesting cases of infective endocarditis have come under my care—one in private practice, and the other in my service at the Albany Hospital,—and it has seemed to me that they might prove of as much interest to you as anything else that I could offer.

*Case 1.* During the evening of July 10, 1902, R. B. B., an American by birth, residing in Cincinnati, Ohio, spending his summer vacation at Murray Bay, Canada, came to consult me pro-

fessionally. He had been up and dressed all day, had been out to drive with his wife in the afternoon, but did not feel well, attributing his illness to an attack of malarial fever which came on before he left home and from which he thought he was still suffering. Although he had taken quinine during the day his temperature was then 102.8°. I advised his going at once to bed and promised to see him the next morning.

The next day I got the following history:

He was forty-six years of age, a lawyer by profession, and born in the United States.

*Family history:* His father and brother had repeated attacks of gout. His maternal grandmother died, at about forty, of phthisis pulmonalis, and perhaps one maternal uncle whose habits were not of the best.

*Personal history:* He had the usual diseases of childhood and afterwards enjoyed good health until he had a well-defined attack of malarial fever in 1879. Several times since he has had pains in his bones and the usual symptoms of malarial infection, the attacks being always readily controlled by quinine in powder, or Warburg's tincture. Had "walking typhoid" in 1884. Has had three severe attacks of gout, the last of which, in 1898, was complicated by some valvular lesion of the heart.

*Present illness:* On May 28, 1902, he was taken ill with the usual symptoms of an attack of malaria, which did not yield to treatment as promptly as usual. At about 5 p. m., on June 10, he had a severe chill, followed by fever and sweat. The chill has not been repeated; but since that date he has never failed to have an evening rise of temperature and a sweat at night.

Dr. Frederick Forchheimer, of Cincinnati, attended him at that time and got Dr. Allen Ramsey to make a blood examination. About June 15, according to our patient's statement, he reported "the form of plasmodium which causes Roman fever." He has taken fifteen-grain doses of quinine at 6:30 a. m. and two drachms of Warburg's tincture four times daily; and had tried both these drugs in varying doses and combinations. At first there was great depression of spirits; but during the past fifteen days he looks less sallow, has gained five pounds in weight, his appetite and digestion are excellent, bowels regular, and he feels very much better.

*Physical examination:* Abdomen entirely negative, both as to patient's sensations and on examination, except that the spleen

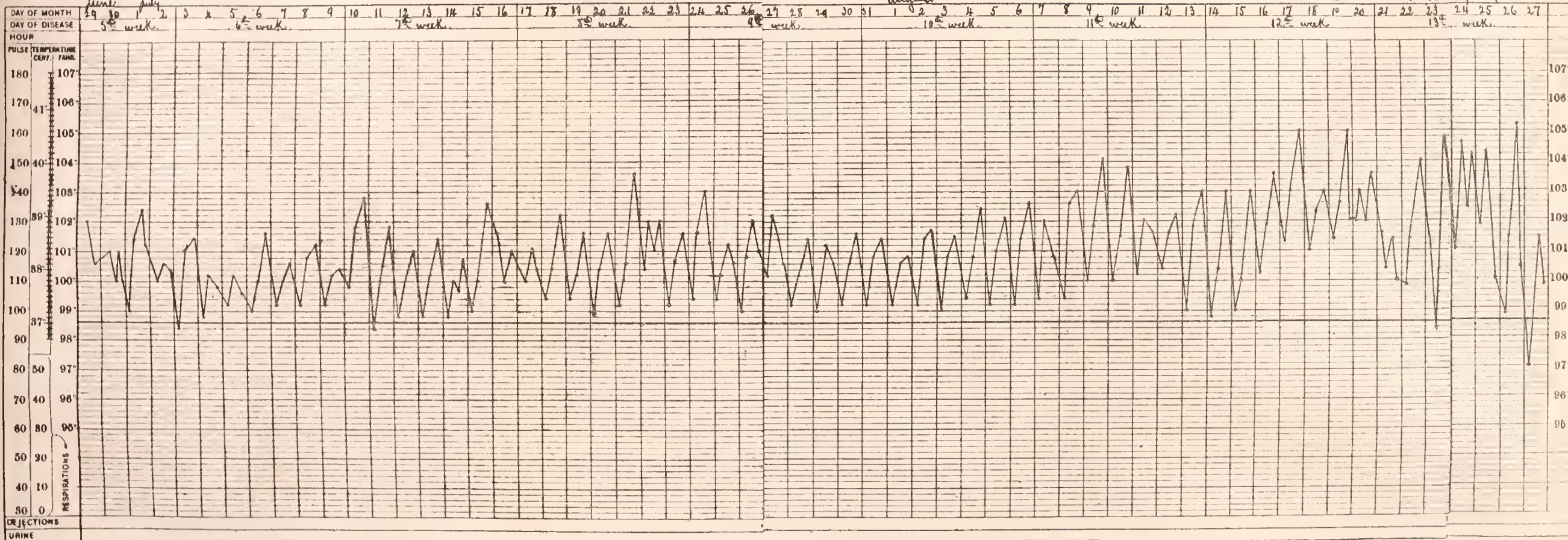


Infective Endocarditis - Case I.

Date June and July 1902.

Date July 4 Aug. 1902

Died Sept. 16, 1902.







was perhaps slightly enlarged. Lungs normal. Heart: in aortic area a double blowing murmur is heard, the diastolic more prolonged than the systolic, and the closure of the valves is decidedly accentuated. At the apex an unusually rough, blowing, systolic murmur is heard, propagated faintly into the axilla and not heard at the angle of the scapula. As before stated, the patient says that this heart-affection dates from his last attack of gout in 1898. But he has never had any pain in the region of his heart at any time; can walk up hill as rapidly as the next man of his age without any shortness of breath, "would not himself know that he had any heart or lungs."

During the next five days the patient was kept in bed on account of his temperature, as shown by the accompanying chart; efforts were made to control the temperature by various antipyretics; and Fowler's solution of arsenic was vainly tried as a substitute for quinine.

On July 16th, Dr. William Osler, of Baltimore, saw him with me in consultation. He described the aortic direct murmur as quite distinct, but presenting no unusual features. The diastolic murmur he found of unusual intensity in the aortic area and unusually widely distributed. It was heard loudly all over the upper portion of the sternum, and more to the left than to the right of the median line, as if there might be dilatation of the arch of the aorta. No venous hum at the root of the neck. The systolic murmur at the apex he found peculiarly rough, not the usual soft, blowing murmur of mitral regurgitation; heard faintly in the axilla and not at all at the angle of the scapula.

Dr. Osler's diagnosis was an infective endocarditis, grafted onto an old heart affection. He said that he had seen fever kept up as long as this, and even longer, up to eleven and thirteen months, by this condition. I must confess that at that time I never had. The patient was now just completing his seventh week of continued fever.

In order to determine whether there was still a malarial complication, a blood-smear was sent to Dr. Chas. F. Martin, of Montreal, who reported on July 18, "no crescents; slight polynuclear leucocytosis."

The patient and his family were very much surprised at the report that the blood showed no evidence of the malarial parasite, and at their request another smear was sent to Dr. Charles S. Williamson, of Chicago, who reported by telegraph on July 25,

"malarial parasites in abundance; letter follows." His letter was dated August 4, and part of it reads: "In a short half-hour search I found four or five well-marked, beautifully-stained parasites and one crescent. The diagnosis could have been made with certainty from any one of them. I have seen and examined the blood of probably two hundred cases of the æstivo-autumnal type and these were absolutely typical. We stain with carbol-thionin. From your account of heart findings, things have changed greatly since I examined it eighteen months ago. I have never seen a case of endocarditis with any form of malaria where the latter could with certainty be said to be the cause of the former. It would seem just within the range of possibility. I am at a loss to explain the absence of splenic enlargement."

On July 27, Dr. Osler secured a microscope and immersion lens from Montreal and he examined smears taken on this and subsequent days, without ever finding either crescents, intracellular organisms, or pigmentation.

On July 28, smears were sent to Dr. Thayer, in Baltimore, and to Bender Laboratory and my clinical assistant, Dr. Jas. F. Rooney, in Albany.

On July 30, Dr. Arthur T. Laird, of the Bender Laboratory, reported: "I have been unable to detect the presence of any malarial organisms in the specimen of blood received this morning. The film was not a very satisfactory one."

On July 30, Dr. Rooney also reported: "I could not find any plasmodia."

The report from the Johns Hopkins Laboratory was also negative.

At this time, then, one observer found what he considered evidence of malarial infection, while five others could find no such evidence at all. The temperature chart and the history of the case pointed to the presence of an endocarditis such as is not known to be produced by malarial infection. Two interesting questions then arose. First, were the heart sounds the same as after the last attack of gout in 1898, or had a change occurred which would indicate a recent attack of endocarditis? And, second, if there was a recent infection could its point of entrance into the system be ascertained?

To settle the first question we wrote to his former medical attendants to ascertain whether they had kept notes of his case. Dr. Jos. Eichberg, of Cincinnati, replied that in the autumn of

1898 the patient had comparatively feeble heart action, with slight dilatation, the line of precordial dullness extending to the right almost as far as the right parasternal line. Apex beat normal. Aortic regurgitation heard plainly both to the right and left of the sternum, as well as beneath it, at the level of the third costal cartilage. At the apex there was a soft systolic murmur, which he was inclined to attribute to relative mitral insufficiency.

Dr. F. Forchheimer, of Cincinnati, wrote: "When I first examined Mr. B., about October, 1900, he had aortic insufficiency, with complete compensation, and no dilatation of the aorta. During the course of his illness no other lesion developed, my last examination being about June 20, 1902."

Dr. Chas. Spencer Williamson, of Chicago, said: "I examined Mr. B., in the latter part of 1900, about Christmas, and found him to have commencing arterio-sclerosis of the aorta, hypertrophy and dilatation of the left ventricle, slight in degree, and due to an aortic insufficiency also of low degree, and in a state of perfect compensation. The aortic insufficiency was of arterio-sclerotic and not of endocarditic nature, in my judgment. The auscultatory findings were, both sounds clear at apex; a long-drawn diastolic, soft murmur at third left costo-sternal junction. The second aortic sound was still partially preserved, a fact which spoke still further for the low degree of insufficiency. No other pathological conditions were present at that time."

Comparing these statements of the heart-sounds on previous examinations with our finding in July, 1902, it was clear that there was a decided change, which could scarcely be attributed to anything else than an infective endocarditis, such as the malarial organism was incapable of producing.

We then started inquiries to see whether there was any probable source of infection. He had had no tonsillitis; no injury, or annoyance in his mouth, or teeth, or at any of the outlets of the body. During the second week of April, 1902, he was very busy and obliged to do more walking than usual on the stone sidewalks. About April 15, as the result of this, he noticed a bruise on the ball of one foot, a little back of the roots of the toes, precisely such as he had had two or three times before, from a similar cause. Four or five small "sacs" formed, were pricked with a needle and discharged serum or sero-pus. He walked around for about a week after this, when one day the foot became more painful and somewhat swollen. That evening a red, inflamed



spot appeared on top of the foot, about the size of a silver quarter-dollar, certainly not larger. Hot poultices were applied that night and ice the next day. For a few hours reddish, or purplish, streaks appeared, running from between the toes up to the red spot and perhaps a fraction of an inch beyond it, up toward the ankle; but about that point he was in doubt, and they disappeared entirely in about twenty-four hours. He remained in bed four days; had no fever at any time; and was back at work in his office on the fifth day. A slight nodule was left where the red spot had been, which was painted with ichthyol and soon disappeared. Since then the foot had given him no trouble whatever. Before May 1 he was just as well as he had been at any time during the winter, did lots of hard work during that month, and remained perfectly well until May 28, when his present illness began. Careful examination in July disclosed no remains whatever of this affection of the foot, nor were there any enlarged or indurated glands in the groin or elsewhere.

Unless this was the point of entrance of the infection we were unable to discover it. If it was, then it is possible for a staphylococcus infection to lie absolutely dormant in the system for a period of four weeks, and at the end of that time suddenly burst forth with fatal result.

On August 16, Dr. E. G. Janeway, of New York, saw Mr. B. with Dr. Osler and myself, agreed with us entirely as to the diagnosis of infective endocarditis, and we all agreed that it was desirable to get him home as soon as possible.

To reproduce the daily bed-side notes of the case would only prove tedious. Everything that occurred to me as likely to be of benefit was tried and everything that Dr. Osler and Dr. Janeway could suggest. During August he had three severe chills, occurring without any regularity.

We left Murray Bay by boat at 10 p. m., on August 23, took a private car in Quebec, and reached Cincinnati at 7:30 p. m., on August 25. He stood his journey very well and had a good night after reaching home.

On August 26, Dr. Robert W. Stewart took charge of the case and that afternoon Dr. Ramsey took some blood from his arm to make a culture.

On September 10th, Dr. Stewart wrote me that there was no essential change in his condition; irregular chills and fever continue; afternoon temperature varies from 103° to 105°. Treat-

ment consists of heart stimulants, alcohol and food. The blood examination showed staphylococcus aureus in pure culture and no malarial organisms.

He subsequently wrote me that Mr. B. gradually failed, with no important change, until he died at 8 p. m., on September 16, 1902.

His urine was examined ten times between August 27 and September 15. The sp. gr. varied from 1015 down to 1008 on the day before he died. Albumen was constantly present in small amounts. No sugar was found at any time. A few hyaline, granular and epithelial casts were constantly present. Toward the last quite a little pus was present and a few red corpuscles.

As the result of the blood examination, on June 15, 1902, Dr. Ramsey reports: "Aestivo-autumnal malaria. Two ovoids found. Reds, 4,432,000; whites, 5,800. Hæmoglobin, 70%."

On August 26: "No plasmodia. Leucocytes, 15,000. Culture shows staphylococcus aureus."

No autopsy could be obtained.

In a letter dated May 4, 1903, Dr. Stewart stated that, "Dr. Foechheimer says he thought that the suppuration in the foot engrafted a septic process upon the endocardium, and asked me to tell you so."

Dr. James B. Herrick, of Chicago, read an excellent paper on "The healing of ulcerative endocarditis," which will be found in the published transactions of the Association of American Physicians, for 1902. In speaking of the differential diagnosis between the vegetative, or benignant, form of endocarditis, and the ulcerative or malignant form, he frankly admits the difficulty in certain cases, and the frequency of recovery in the simple acute form, contrasted with its rarity in the ulcerative form. But he very properly objects to the statement sometimes made, that "if the patient recovers, the case was one of the benignant or vegetative form; if he dies, it was malignant or ulcerative."

It may be admitted that in the case of recovery it is difficult, or perhaps impossible, to *prove positively* that the case was malignant. Yet the proof seems to be sufficient, as was shown by the discussion following the reading of Dr. Herrick's paper, to convince such men as Thayer, Kinnicutt, Janeway, Shattuck, Jacobi and Osler that occasionally, though rarely, recovery does occur.

In the following case the facts are that the patient had an endocarditis; that he had the usual symptoms and temperature curve of a septic poisoning; that an examination of the blood

showed the staphylococcus pyogenes aureus in pure culture; and that he recovered. Personally I do not see room for reasonable doubt that he had ulcerative endocarditis.

*Case 2.* H. J., age thirty-one, born in the United States; student and commercial traveler by occupation; was admitted to the Albany Hospital on February 13, 1903. He complained of pain in his stomach and back, and around the heart.

*Family history:* His father and mother are living and well; has lost no brothers or sisters; has two brothers and one sister living and well. Several members of the family have had rheumatism, but no other disease has been common.

*Personal history:* Had the usual diseases of childhood. At about twenty had pneumonia twice. Had attacks of acute articular rheumatism at eight, twelve and sixteen years of age, the last accompanied by some heart complication. Since that time has worked three summers as hotel-porter, lifting and carrying heavy weights. Has had six or eight attacks of biliary colic, some of them exceedingly severe.

*Present illness:* Was taken with pain in his back about February 9, 1903, which gradually increased and finally got around in the vicinity of his heart, and on this account he came to the hospital. He has had no tonsillar troubles; no rectal or urethral affection; no wound or abrasion of any kind.

*Physical examination:* He is strongly built, well-developed and well-nourished. Skin and mucous membranes normal. He lies on his right side with a fair degree of comfort, but cannot lie on his back or his left side. Precordial region prominent. Apex beat in vertical line passing through the nipple and an inch and a half below it. Pulsation apparent in veins of neck. Respiration regular but shallow. Deep inspiration causes pain in the region of the heart. Left lung emphysematous; right lung normal. Absolute heart dullness decreased; relative dullness slightly increased. Apex beat at limit of area of dullness. In aortic area double murmur heard, loudest at third right interspace and transmitted about two inches and a half in every direction. No thrill felt.

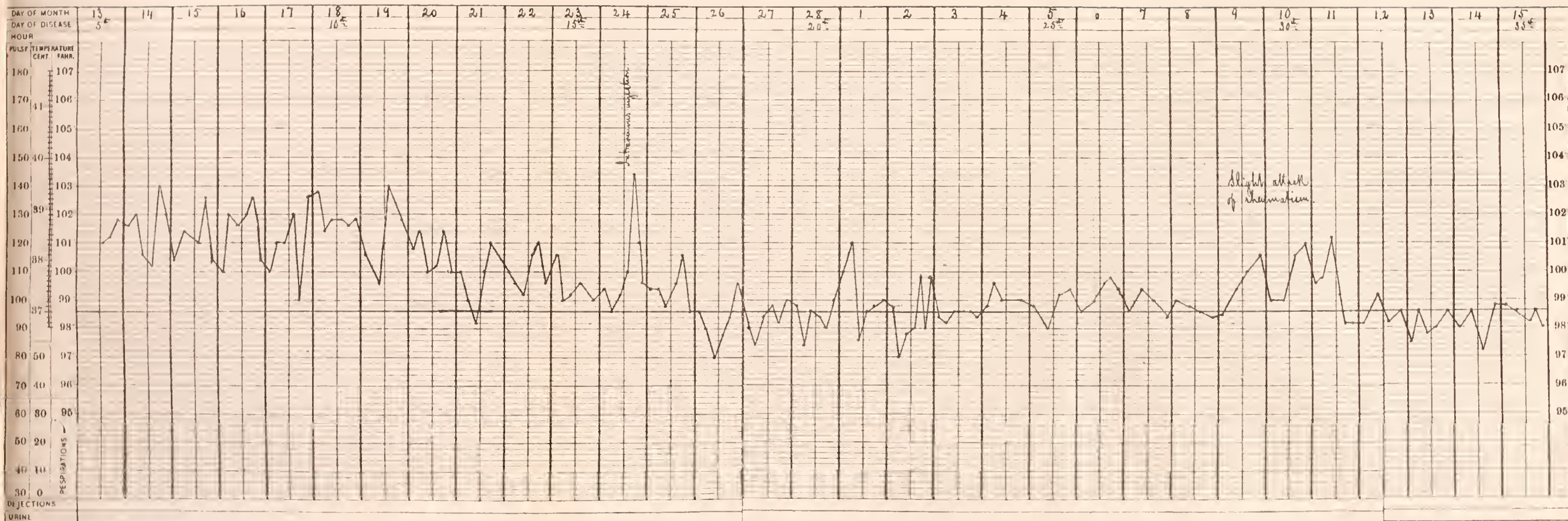
A small blister to the precordial region on February 14, gave marked relief to the pain in that region and five grains of calomel relieved his abdomen.

Examination of the urine on the same day showed it to have a sp. gr. of 1033; some albumen; no sugar; a few leucocytes; many urates; uric acid crystals; no casts.



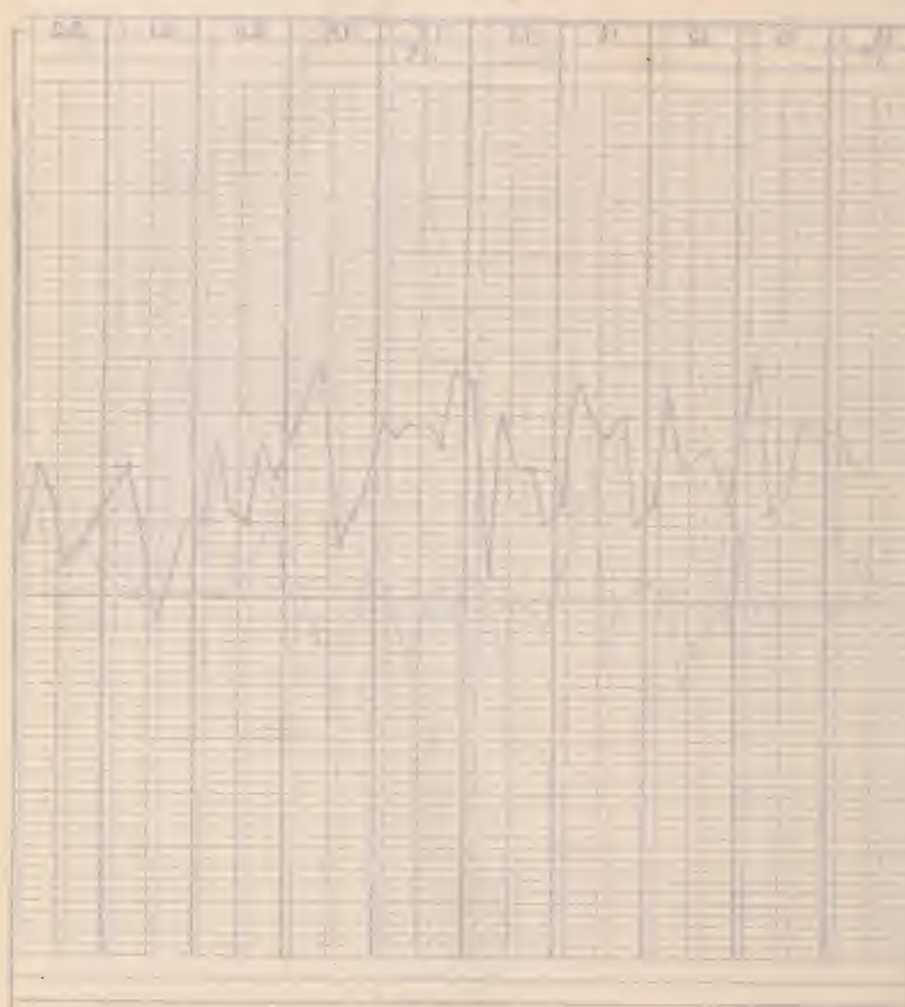
Name *H. J.*

Infective Endocarditis. Case II.

Date *February and March, 1903.*Date *March, 1903.*



Life-time distribution of the



On February 22, and the two days following, the pain was so severe as to demand hypodermics of morphine and atropine for its relief. He could take very little food and his general condition was growing steadily worse.

On February 23, my clinical assistant, Dr. James F. Rooney, reported as the result of a blood-culture which he had made for me, the *staphylococcus pyogenes aureus* in pure culture.

February 24. Has been steadily failing during the past two days, although his temperature has been falling; in fact, on several occasions he has appeared to be moribund. Pulse, 84 to 100; respiration, 30 to 60, shallow and unsatisfactory.

After consultation with Dr. W. G. Macdonald, of the surgical staff of the hospital, it was decided to try the intravenous injection of formalin in normal salt solution.

Dr. Berry, Dr. Macdonald's assistant, describes the patient's condition and the operation substantially as follows:

Patient obliged to lie on his right side on account of heart-distress; very pale; considerable respiratory distress, inspirations consisting of short, quick gasps; pulse rapid and irregular, of poor quality and low tension. In fact, he seemed almost moribund. Under strict antiseptic precautions, a bandage having been tied above the elbow to engorge the superficial veins, the median-basilic was exposed, a ligature passed under it and a small canula inserted in the direction of the heart. 100 cubic centimeters of blood was allowed to escape and caught in a sterile flask for examination. It was intended to inject 500 cubic centimeters of a solution of formalin in normal salt solution of the strength of 1 to 4,000; but when 300 cubic centimeters had been slowly injected, during fifteen minutes, the patient began to complain of such intense burning pain in the back of his head that the operation was stopped at 360 cubic centimeters. At that time he cried out that he "was on fire" and could not stand any more. The pulse improved during the operation.

The temperature when the operation began, at 6 p. m., was 100°; two hours later it had risen to 103.4°; and at midnight it had dropped back to 99.6°. His pulse was intermittent and irregular until 8:30 p. m., when he suddenly broke out into a profuse perspiration and fell asleep. At 10 p. m., he awoke, for a few minutes, in much better condition and said that he "felt fine."

February 25. Lowest temperature during the day was 98.6°;

highest 100.6°. Pulse, 84 to 112. The pain about his heart was practically gone; respiration still rapid, but much easier and more satisfactory; is entirely relieved of the air-hunger from which he suffered so much before the injection. Complains of some muscular pains and stiffness. Has some pain about the heart after drinking anything cold. Some twitching of the muscles of the forearm and hand. During the day took three twenty-fifths of a grain of nitroglycerine with benefit.

February 28. Has slept eight or nine hours each night and has improved slowly and steadily. Pulse less bounding; cardiac impulse less heaving; air-hunger gone. Aortic systolic murmur very widely diffused, being heard in both axillæ and faintly all over the back.

March 7. Urinary examination. Sp. gr. 1030; acid; no albumen; no sugar. Many small hyaline and granular casts. Few uric acid crystals.

March 11. No murmur to be heard to-day except the aortic regurgitant, which has been constant since admission to hospital. Has had some rise in temperature for the past three days, and rheumatic pains in both shoulders and across the chest. No evidence of renewed endocarditis.

March 15. No fever during past three days, the mild rheumatic attack having yielded promptly to aspirin.

May 7. Examination of his heart to-day revealed the following: Apex-beat in fifth interspace just outside the nipple line. Area of dullness increased. In *mitral area*, lying on his right side, no murmur whatever at apex, in axilla, or at angle of scapula; lying on his back, there is a soft, systolic, blowing murmur, not propagated in any direction. In *aortic area*, short, slight, systolic murmur; valves close with a decided click; prolonged, much louder, diastolic murmur, heard the whole length of the sternum. No murmur in the vessels of the neck. Sits up some hours every day, but is still weak. Intends going home in a few days. Urinary examination: 1024; no albumin; no sugar; acid; amorphous urates; no casts.

Much discussion has been had recently concerning the effects and remedial value of the injection of formalin into the veins. It has been claimed that this drug tends to destroy the erythrocytes. Immediately following the injection in this case there was marked crenation of the reds, with basophilic degeneration, gradually diminishing for three days and disappearing on the fourth day.

It will be remembered that the amount injected was small and I am inclined to the belief that this may have been fortunate for the patient. The radical improvement in the patient's condition, following immediately after the operation, was apparent to everyone who saw the case, and attributable to nothing else that we know of. I am of the opinion, however, that it may be attributed to the abstraction of blood, and injection of normal salt solution, rather than to the specific action of the formalin. Previous to the injection he had a leucocytosis for several days varying from 20,000 to 26,000. Immediately after the injection it rose to 30,000, but diminished gradually and the count was normal on the tenth day.

There is nothing new in the statement that the heart-sounds vary markedly from time to time, in some cases almost from day to day, in endocarditis, either benign or ulcerative. Our second case illustrated this point very well.

It has been stated that the organisms of malaria may appear and disappear with astonishing rapidity in the peripheral circulation. This may account for the fact that Dr. Williamson found them in a specimen of blood taken on July 23, while so many others failed with specimens taken before and after. Even with their presence granted, the leucocytosis in the first case was a strong argument in favor of an associated infection.

Both of these cases illustrate the difficulty of ascertaining with certainty the point of entrance of the infecting organism, and both go to prove the truth of the statements previously made that the staphylococcus, in particular, may lie dormant in the system for an almost indefinite period.

For the preparation of the bibliography of this subject I am greatly indebted to Dr. Rooney.

The literature of the past three or four years contains a number of articles of interest in this connection.

Harbitz records fifty-four cases of endocarditis which he studied pathologically, thirty-nine of which he considered to be infectious. As to the frequency of different forms of infection, he found eleven to be due to streptococci, seven to staphylococci, five to pneumococci, two to gonococci, two to an unknown micrococcus and one to an unknown bacillus, no statement being made as to the remaining eleven cases. In six cases the ulcerations had healed before death. These cases presented large outgrowths upon the endocardium, and at the borders of the vegetations there



were masses of bacteria, but cultures remained sterile. He thinks that there are two anatomical varieties of the infectious form, one consisting in the growth of excrescences without ulceration, the other having destructive effects upon the endocardium and valves.

James reports a case in which the rational symptoms pointed to influenza and meningitis; but the presence of a heart-murmur (character, location and time not given) led him to the diagnosis of ulcerative endocarditis. The entire duration of the illness was but seven days. At autopsy there were found numerous metastatic suppurative areas, and ulceration of the mitral valve with some suppuration in its substance.

Washbourne reports a case cured by the use of antistreptococcic serum. The patient was a young woman, with irregular fever, chills and sweats. Leucocytosis, 12,000 to 18,000. No localizing symptoms for nearly six weeks; then a diastolic murmur in the pulmonary area. Twenty cubic centimeters of antistreptococcic serum was injected daily for the greater part of the following nine weeks. The temperature fell at once and remained normal save for a period when the injections were given only on alternate days. At the end of nine weeks recovery was complete except for the persistence of a murmur.

Pearse reports the case of a girl of sixteen, who had all the symptoms of ulcerative endocarditis (not detailed) who, after doing badly under all other modes of treatment, slowly recovered under injections of antistreptococcic serum.

Powell tabulates twelve cases, treated by antistreptococcic serum, in three of which recovery ensued. A fourth case recovered under the use of intravenous injection of cultures of yeast.

Pollock had two cases which he treated with antistreptococcic serum without success in either.

Fox reports a case in which streptococci were demonstrated at autopsy, treated by antistreptococcic serum, in which its use seemed to hasten the fatal termination.

Pitt records two remarkable cases. The first began with pain in the back, fixation of the dorso-lumbar spine upon stooping, followed by incontinence of urine and feces—symptoms suggesting organic lesion of the spinal cord. These symptoms disappeared and were replaced by others typical of ulcerative endocarditis. The earlier symptoms were probably due to embolism of the small vessels of the cord. The second case had pain in the back, with

petechiæ, cardiac murmur and fever. The pain in the lumbar region increased in severity, incontinence of feces developed and it was thought that the case was one of spinal caries. Spinal symptoms vanished, being replaced, as in the previous case, by those of endocarditis. Both of these cases proved fatal.

Herzog records nine cases, in only one of which was the right heart affected. One case was associated with malaria, and in another there was a marked tendency to hæmorrhages from the mouth, probably due to an accompanying hepatic cirrhosis.

Mathews and Moir report a case which was diagnosed before death as typhoid because of the occurrence of the Widal reaction, which was at first "positive but not distinct," but later became certain. (The reaction was probably due to the low dilution employed—1 to 20.) The autopsy showed ulcerative endocarditis and no typhoid.

Thayer and Lazear report a case of gonorrhœal endocarditis and discuss those previously reported. In their own case gonococci were found in the blood during life and in the intracardiac vegetations after death. Of fifteen cases in which the diagnosis was certain in nine the *right* side of the heart was affected, as in their own case. The endocarditis, as well as the general septicæmia, occurring in the course of a gonorrhœa may be due to other organisms than the gonococcus.

Moritz treated a case with antistreptococcic serum (no blood-cultures) with recovery. Six injections of five cubic centimeters each sufficed to control the acute symptoms. Two weeks after treatment was begun, when illness had already lasted two months, the temperature became normal. Six weeks later the patient was in good condition save for tachycardia and heart-murmur.

Rogers treated a case in which the diagnosis had been made by finding streptococci in pure culture in the blood-stream. Five injections, of ten cubic centimeters, of antistreptococcic serum were given. Violent pain was caused by each injection, the treatment was wholly without effect and death ensued. Culture made at the autopsy showed both strepto- and staphylo-cocci, the latter considered a post-mortem invasion.

Abram treated a case with serum after streptococci had been found in the blood. After death it was found that the streptococci had disappeared, and there was a general staphylococcus infection. Abram believes that the serum had caused the destruction of the streptococci.

Boston describes a case which was associated with cerebrospinal meningitis and myocardial abscess. The diplococcus meningitidis intracellularis (Weichselbaum), and the staphylococcus aureus were recovered at autopsy, the meningococcus being pathogenic for mice.

La Vastine reports a case of infective endocarditis, blood cultures showing many strepto- and a few staphylo-cocci. The use of antistreptococcic serum was followed by improvement, repeated doses resulting in recovery.

Fox and Lermite report a case of infectious endocarditis in which fifteen doses of ten cubic centimeters each of antistreptococcic serum were administered without benefit. Autopsy showed the presence of lesions of the aortic and mitral valves and the staphylococcus pyogenes in the blood. There were also effusions in the pericardium, peritoneum and left pleura.

Cotton reports a case of infective endocarditis implanted on a congenital malformation of the heart, in a boy of eleven years, noma appearing several weeks before death. Autopsy showed pulmonary stenosis, deformity of two pulmonary cusps and perforation of the ventricular septum. In addition there was an acute mural endocarditis and aneurism of the wall of the right ventricle. Streptococci were obtained from the vegetations in the heart.

Davis, N. S., Jr., describes as case which he considered to be malignant endocarditis in which recovery occurred. There was first gastric disturbance followed by paroxysmal dyspnoea; then fever of typhoid type; splenic enlargement; no malarial plasmodia; Widal negative; afterwards weak heart sounds and distinct aortic murmur; chills and leucocytosis. After use of unguentum Credé, gradual recovery; disappearance of murmur; sound still impure. Albumen was found in the urine during the course of the disease.

Ewart records the case of a young man of twenty-six, admitted with aphasia and right hemiplegia; the only cardiac sign was a systolic murmur. Irregular fever; rapid pulse; albuminuria; sudden death after administration of antistreptococcic serum. Autopsy showed vegetations on mitral valve with perforation of one leaflet and involvement of myocardium. The left middle cerebral artery contained a clot and there were areas of softening at the tip of the temporo-sphenoidal lobe and in the Island of Reil.

Gavala reports a typical case occurring in a twenty-year-old

man, following violent exertion, he having had rheumatism some months before. Autopsy showed suppurative tonsillitis and pharyngitis; myocarditis, pericarditis, and endocarditis involving the mitral valve; metastases to the brain, lungs, spleen, liver, kidneys, small intestines and skin. The staphylococcus aureus was found and the tonsils contained also the staphylococcus albus and streptococcus pyogenes.

Clarke gives a report of a case which he considers ulcerative endocarditis. Previous history of rheumatism. Pleural effusion; precordial pain, œdema of ankles; sudden chills; rise of temperature, which afterwards followed an irregular course. Cardiac murmurs, varying in location and intensity. Antistreptococcic serum was used, in doses of ten cubic centimeters, every day or every alternate day. After recovery there was persistence of a marked systolic murmur, of greatest intensity in the aortic area. Bacteriological examination of the blood was negative. The serum used was polyvalent.

Ogle reports the case of a man of twenty-six years, with history of rheumatic fever four or five years previously, who had not felt well for six months before coming under observation. Increased area of heart dullness. Aortic diastolic, and mitral systolic murmurs were present. Collapsing pulse. Temperature, 97° to 102°; pulse, 104 to 120. No source of infection found save, perhaps, carious teeth; no gonorrhœa, or otorrhœa. Blood culture showed streptococci pure. 110 cubic centimeters of antistreptococcic serum were injected in all, in the course of twenty-seven days, in doses of five to ten cubic centimeters on alternate days. Each injection was followed by quick pulse and faintness with much pain at site of injection. There was temporary improvement, with persistence of bad circulation; but finally, death. No autopsy. The serum used was polyvalent.

Lenhartz (München. Med. Woch., Nos. 28 and 29, 1901), makes two groups of septic endocarditis, one in which the endocarditis is the most prominent thing in the clinical picture, and the other in which it is only one of the prominent symptoms. He describes thirty-eight cases, in two of which endocarditis arose after urethral conditions such as gonorrhœa and trauma. Five cases followed croupous pneumonia. Twenty-eight cases were investigated bacteriologically, nineteen of which were acute and nine chronic. In sixteen cases bacteria were found during life; in nine they were found in cultures or smears post-mortem. In



three they were found in sections of the valves. The organisms present were staphylo-strepto- and pneumo-cocci. In only one case was the gonococcus found. It was usually easy to find the organism in the blood. He has had no satisfactory results from Marmorek's serum.

Jackson (Med. and Surgical Reports of Boston City Hospital, Vol. XI, page 67) reports fifty-nine cases of malignant endocarditis of which forty-three were examined post-mortem. Twenty-four of the latter occurred in men; nineteen in women. Thirty-two occurred in patients between twenty and forty-five years. The aortic valves were alone affected in nine instances, the mitral alone in fifteen, both together in ten. The right side of the heart was involved six times and the endocardium of the ventricle three times. Enlargement of the spleen was present in all instances but one. Thirteen times there were infarcts; twice small abscesses. Miliary abscesses of the brain, as well as acute purulent meningitis, were present frequently. Leucocytosis of 16,000 to 20,000 was regularly present. Twenty-three cases were studied bacteriologically. In two no cultures were obtained. In two unidentified organisms were found; in eight streptococci; in five pneumococci; in three staphylococcus aureus; in one colon bacillus; in one strepto- and staphylo-coccus together; and in one streptococcus with other organisms. Organisms morphologically similar to gonococci were several times found in microscopic section of the endocardium.

Cooper, H. M. (*British Med. Journal*, May 10, 1902) reports a case treated with antistreptococcic serum. Streptococci had been isolated from the blood. Temporary improvement; recurrence of unfavorable course; death. It was thought that an earlier use of the serum might have caused recovery.

It seems still uncertain whether there are several species of streptococci, or whether the same germ in different soils and under different surroundings, secretes toxins varying quite essentially from each other. There seems to be little doubt, however the fact may be explained, that in order to obtain good results from the use of antistreptococcic serum the latter must have been obtained from a case similar to the one in which it is to be employed. Serum obtained from the streptococcus of erysipelas does not appear to have any beneficial effect in a case of scarlet fever, and *vice versa*.

In considering the cases briefly abstracted above it will be

noticed that in some instances the treatment by serum was followed by recovery, in others seemed to exert no influence, and in a few to be positively harmful. Until some means is devised for differentiating the streptococci it would seem that the results of the use of the serum must be somewhat a matter of chance. It might be advisable in case the injection of one serum does not result in speedy improvement to try another manufacture.

Of course it is idle to expect good results from the injection of antistreptococcic serum in a case of staphylococcus infection, as I have known to be done in one case.

The withdrawal of blood from a vein and injection of normal salt solution might be worthy of further trial, and the effect of this procedure may well be more advantageous than the simple subcutaneous injection. It is pretty generally conceded now that the intravenous use of formalin is without advantage if not really dangerous.

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## VARICELLA

## WITH A REPORT OF AN UNUSUAL EPIDEMIC

*Read before the Medical Society of the County of Albany November 12th, 1902, and by request before the Medical Association of North Berkshire, North Adams, Mass.*

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The great majority of American, and many foreign observers, are so thoroughly convinced of the duality of varicella and variola, that it may seem at first glance, a waste of time for me to discuss, what von Jürgensen calls their "universality." The epidemic which it is my purpose to describe, presents so many arguments on both sides of the question, however, that I think you will agree with me that a brief resumé of the history, etiology and course of the former disease and arguments, pro and con, will not be amiss.

*Definition.*—Varicella is an acute, specific, and very infectious disease, especially of infancy and early childhood, not dangerous to life, characterized by the appearance on the skin, of successive crops, of clear, colorless, watery vesicles. The accompanying fever is usually moderate and remittant in type, increasing and abating as the vesicular rash comes and goes.

*History.*—The disease was first described in 1550 by Vidus Vidius and Ingrassius of Naples, who called it "*crystalli*," on account of the clear, crystalline contents of the vesicles; it is still called in Scotland, "crystalpox," and in England, "Glasspox." In England Heberden first described it in 1761 or 1766, calling it "*Variolae Pulsillae*." The name, varicella is said to have been given it by Vogel in 1764, this, like that of variola, being a diminutive of the Latin, *varus*, a pimple.

*Etiology.*—Varicella is a disease of childhood, and while it most frequently occurs before dentition is complete, it is not unknown in young adult life, Baader of Basle reporting a case occurring as late as the fortieth year and H. Grabham Lys, one at thirty-two.

It may occur sporadically or in epidemics and season

seems to have no great influence on its occurrence. Out of 435 cases in the practice of Thomas, 46.5 per cent. occurred in the first half of the year (January to June), while von Jürgensen, at the Tübingen clinic had a percentage of 63.9 in the same half of the year out of 133 cases.

Curiously enough, and for no assignable cause, it often follows, close upon some other specific fever, especially scarlatina.

No specific germ has been isolated but it can be inoculated, as shown by Steiner of Prague. The inoculation is not always successful and is attended with some difficulty, yet it spreads by contagion with infinite ease and rapidity. The virus however does not have a very great tenacity of life.

As a rule, one attack confers immunity, although there are notable exceptions to this and it may recur several times, as my cases would seem to show. As to this statement (recurrence), Gerhardt says: "The protection secured by one attack is more uncertain than in small pox; I have treated one child three times for varicella." Unfortunately, however, he gives us no detailed report of this case.

Inoculation with the variola virus does not produce varicella, nor does inoculation with the virus taken from the varicella pock produce variola; neither does an attack of varicella confer immunity from variola, and a patient who has had variola may contract varicella; variola and varicella may exist at the same time and in the same person.

To illustrate this: Steiner of Prague inoculated in all, about forty children who had never had chickenpox, never had smallpox, and none of whom had been vaccinated; a number of these developed typical, mild cases of chickenpox after an incubation of eight days, and none of them had the slightest symptom of smallpox. "The external form of the pustule, does not differ. Kassowitz quotes the statement of Gerhardt: 'That a form of disease similar to varicella arises at times from undoubted inoculation with true smallpox, both in persons who have been vaccinated and those who have not. It would be of great practical importance to be able to distinguish this varicella-like smallpox, from which the true smallpox may arise by inoculation, from simple varicella. As positive indications, however, only two points can be given: The ability to produce true smallpox by inoculation and the



production of true smallpox.'” In closing his, by no means convincing argument, he says: “It is surely permitted that one deduce individual convictions from a large number of self made observations, and only on this account will I speak of my own experiences.”

Karl Hochsinger of Vienna, believes that, “variola and varicella are etiologically the same,” and the following from his article on that subject is of considerable interest: “In the month of April, 1890, Franz K., a lad aged ten years, a gymnasium student, was attacked with varicella. Fourteen of his schoolmates, according to school reports, were kept from school at the same time on account of varicella. I observed in the boy, a typical case of varicella with a few, quickly developed, clear vesicles. The affection ran its course smoothly in a few days without causing the least rise in temperature or confining the boy to his bed. The older brother of the boy, Hans K., aged thirteen years, a pupil of the same gymnasium, but of a higher class, in which there was no varicella, was kept from school, from the day on which his brother was attacked, on account of our sanitary laws. Without being isolated, he remained at home with his brother and his mother, a lady forty years old, who also remained indoors to prevent spreading the infection. On the twelfth day after the outbreak of the exanthem in Franz K., his brother and mother were taken sick at the same time. The older brother presented a typical picture of varicella, but the mother had variola of a severe type.” (Here follows an accurate description of a typical case of smallpox.) “The vaccination history of these patients is of great interest. Both boys were vaccinated in their infancy and again in 1885. The mother had been vaccinated three times, once in childhood, again fifteen years before, and last five years before, at the same time that the boys were vaccinated. In all the members of the family the vaccination was in each case successful.” While Hochsinger considers the diseases as etiologically the same, he believes them to be clinically different, but Thomas in discussing these three cases believes them to have all been variola. Von Jürgensen’s observations on these three cases are most interesting, he says: “It is very strange that fifteen students of a gymnasium class, who belong to the higher classes of society and were still under

the protection of vaccination, should at the same time have smallpox even in its lightest form, at a time when, as Hochsinger says, not a single case of variola vera was reported in Vienna. On the other hand the simultaneous occurrence of varicella among so many children who were at just the limit of age when the susceptibility to the disease is lost is not less strange. Add to this that the mother, who, five years before, had been successfully vaccinated for the third time in her life, and thus, according to all experience, was strongly protected from smallpox, was infected with the slightest form of the disease and had to undergo the severe type. I cannot explain these strange phenomena. I only believe that this observation, standing as it does, by itself, does not apply to the question of identity."

What seems to me to be the strongest argument for the duality of the two diseases, is the age question. Although cases of varicella do occur in adult life (as we have seen), it is, to all intents and purposes, limited to the first fifteen years of life, the very great majority of cases occurring before the patient has reached his tenth year. Variola, on the other hand, attacks all ages, and when it does attack children it is usually very severe and the mortality great. As von Jürgensen says: "Is it probable then, that even in non-vaccinated children, only the lightest form of variola should appear, scarcely ever causing a death? The objection, that this may depend on vaccination, which has become a part of mankind and may to a certain degree protect their children, is not to be taken seriously. One need only to show that in earlier times many, probably most, of the children were born of parents who had had smallpox." As to this question of age, Kassowitz, the great champion of the "universalists," says that the difference in the two diseases is merely one of degree, not of kind, forming vesicles in the child because of the tenderness of the skin and pustules in the adult for the opposite reason. Kassowitz prefers to take up and consider each manifestation by itself and after reviewing all the claims put forth on both sides says the reason why is: "If I now sum up everything together, I must place myself on the side of the dualists, and say with them, varicella and variola are essentially different diseases."

Another important argument is that extensive epidemics of

varicella are almost unknown; the disease is usually endemic but when it is epidemic it usually occurs in kindergartens, schools and orphan asylums where the opportunity for communicating it is especially good.

The average period of incubation is twelve to fourteen days although there is almost as great a difference of opinion as to this as there is about other points in the etiology. On this point I consulted twenty-seven different authorities and found that they ranged in their opinions, from Tanner who gives four days, to Trousseau who says eighteen to twenty.

*Morbid Anatomy.*—Few authors pay much attention to the morbid anatomy, so the most excellent and graphic description, by J. W. Moore, in Gibson's Practice, stands out as a gem of the first water: “\* \* \* The varicellous process commences in the reticulating liquefaction of a few prickles cells of the central and upper prickle layer, in the middle of the first-appearing congestive spot. The completely liquefied, confluent cavities rapidly dilate to form the septa, as are the cells above to form the cover of the conoidal, or tent shaped, vesicle. Its contents, at the height of its developement, consist of finely granular, coagulated fibrin, enclosing a few fibrinously degenerating, compressed, or ballooned epithelial cells, and scarcely any wandering cells. The acuteness which distinguishes the varicellous process is evident histologically (in distinction to smallpox) in the relatively few liquefied cells. Notwithstanding its appearance, the chickenpox is certainly not monocular. Its thin covering and superficial position result from rapid formation.”

“The non-purulent character of chickenpox is histologically very pronounced. ‘Its benign, unscarred course,’ says Unna, ‘is explained by the superficial position, the absence of purulent infection of the vesicle, and the early repair by young epithelium, indicated by the numerous mitoses around the cavity. The absence of dimple results from the acute, abortive course of chickenpox, which does not permit the formation of a swollen peripheral zone of reticularly degenerated and very œdematous epithelium.’”

*Symptomatology.*—Invasion: This differs markedly in different individuals, most frequently the child feeling perfectly well until the rash appears or is accidentally discovered. In other cases there is drowsiness, chilliness or even a chill, headache,

loss of appetite, nausea, occasionally vomiting and vague muscular pains a few hours prior to the appearance of the rash. A scarlatinal rash of brief duration, often overlooked, sometimes absent and seldom recurring, precedes the eruption. There may or may not be a prodromal fever just before the appearance of the rash. This fever may rise suddenly to 104°F.

Eruption: The first symptom noted is usually the eruption. At first there are to be seen rose-red, slightly raised points, from the size of a pinhead to that of a split-pea. Frequently they are so crowded together that they coalesce. Many of these abort while others go on, becoming first rosy-red macules; these are soon tensely distended, commencing in the center of the macule, and form a vesicle filled with a thin transparent or slightly yellowish fluid and covered with a thin, transparent membrane. This stage may have been reached in from three hours to twenty-four hours. Occasionally they are multiple and if we prick them we find that the exudate is a thin, albuminous, neutral or weakly alkaline fluid, containing a few leucocytes. The first appearance of the eruption is upon the chest, back, neck, sparingly on the face and always on the hairy scalp. The eruption is found also on the trunk, thighs, legs, arms, hands and feet and on the mucous membrane of the mouth, pharynx and larynx. The vesicles are fewer on the hands and feet than elsewhere and as a point of differential diagnosis, many authors claim that in varicella the vesicles are never found on the soles of the feet or palms of the hand. They are especially abundant in the genital region. Intense and stubborn itching usually accompanies the rash. Of the scarlatinaform rash, mentioned above, a writer in the *Journal des Praticiens*, copied in the *Medical Record*, says, it may and does appear on any part of the body and there is no desquamation, in this differing from variola. An areola forms around the vesicle, being most distinct when the vesicle is fully formed, fading as the latter dries up. Umbilication is soon observed, occurring at the apex, the contents of the vesicle become first milky and later sero-purulent or even purulent. In some severe cases with marked and extensive eruption, some portions are found which are distinguished from true smallpox eruption only by the shortness of time needed for their developement. "Hard



circumscribed thickenings of the skin—they might be called papules—with greatly reddened and swollen areas of inflammation, purulent contents, and later, pitted scars.”

The stage of dessication or crust formation is as variable as to duration as is the eruption itself. The vesicles dry up rather quickly, their contents being either wholly or in part dried up or extravasated. A small, dark colored crust is formed, which drops off in from five to twenty days depending upon the depth to which the skin has been involved. In the severer cases, where there has been an involvement of the true skin, pitting occurs; these scars are most frequently on the face where the skin has had no protection. The developement of pustules is usually due, either to irritation and infection from scratching or because the child is poorly nourished and otherwise unhealthy. All authorities, with the exception of Bohn, assert that the vesicle is multilocular and most of them agree that it may be and frequently is, umbilicated. Their number, according to Thomas, varies from 10 to 800. The vesicles on the mucous membranes, under the influence of warmth and moisture, develope with great rapidity, and superficial ulcers, surrounded by a reddened ring and deprived of epithelium are seen. Gangrenous ulcers, the result of scratching and infection are occasionally seen, Vierordt says frequently, Thomas says never.

Temperature: The temperature has no definite curve although it rises quickly at the beginning, usually to its maximum, and falls to nearly normal on the third day after the appearance of the vesicles. Thomas gives the range, out of a large number of cases as, from 101.0°F. to 106.8°F., the average being 103.4°F. Many cases occur in which the temperature is normal.

*Prognosis.*—To quote Anders: “In private practice, it is always favorable. Only in the slums or in hospital cases complicated by erysipelas, adenitis, or nephritis may grave results be anticipated.” Schwartz reports a fatal case of chickenpox in a child of two and a half years, death occurring in eight days; Nisbet an uncomplicated case in which death occurred in eleven days, and A. Scott Turner one in which death ensued on the third day, although the latter says that the surroundings were dirty.

*Sequelae and Complications.*—Most authorities teach that we have but little or nothing to fear from this cause, yet I find cited cases of adenitis, nephritis, erysipelas, pneumonia, purulent pleurisy, purulent synovitis of the knee joint and a general inflammation of several of the larger joints.

*Diagnosis* (From von Jürgensen).—"1. The elevation of the temperature preceding the eruption is far greater and of longer duration in smallpox than in varicella. 2. With the appearance of the eruption the temperature falls to normal or below it. This is a valid diagnostic point for the beginning of the disease; in the further course, the eruption is to be especially observed. However decidedly I have stated that in the single pustule morphologic transitions from the varicella vesicle to the pustule may present themselves which make it impossible to assign with certainty the single pustule to one disease or the other, yet I must state positively that the general picture of the diseases is different. We see in varicella, after a few days at the latest, the different forms of development beside each other, chiefly red macules and vesicles with a few papules. The latter do not occur in varicella without vesicles. If they are present alone, then, in all probability, smallpox is to be thought of. But in smallpox the papules may be wanting and only pus-filled vesicles may be found; it is always then a very mild case with slight eruption. Here a diagnosis may be impossible. The question of diagnosis is easier to decide if the patient has passed the age of puberty. In that case we must suppose that the patient has the true smallpox, and act accordingly. Of course we must take into consideration whether an epidemic of varicella or of variola prevails and whether we live in a region far removed from intercourse with the outer world or not. But this point need be considered no further."

I will now proceed to the history of the unusual epidemic, which I happened to have charge of.

The cases cited, all occurred in a boarding school for girls, the pupils numbering sixty-five and ranging in age from nine to nineteen years.

On January 21st, 1901, J. A. presented a typical case of *scarlatina*. She was immediately removed to the "Isolation House," a separate building and given a special nurse. Five days later F. H. E., the nurse in charge of the school, who

had never had scarlatina, was attacked and was also isolated with the other case.

On February 5th I vaccinated twenty-nine pupils, among others, D. N., aged thirteen. On February 10th the nurse in charge, who had taken the place of the one with scarlatina, asked me to see this same child (D. N.), who had been complaining of an itching and on whom she said there were "some sores." An examination showed three dried, brown scabs, about one-quarter of an inch in diameter on the scalp, three on the chest, four on the trunk and seven on the thighs and legs, one of these latter nearly one-half inch in diameter, seventeen in all. Several of those on the legs showed excoriations in their immediate neighborhood, due to scratching. There was nothing typical about them and my first thought was that the recent vaccination might be at fault; but the child said she had first noticed the "sores" on February 6th, four days previous to the time my attention was called to them and one day subsequent to my having vaccinated her.

On February 11, the next day, I found twelve cases of typical, mild varicella on my hands; on February 13th, seven; February 14th, three; February 18th, three; and on February 20th, four; thirty cases in all, counting the February 10th case. As these cases were to be found in every "form" in the school and in the older girls (one of eighteen), who had no communication with the younger girls, excepting at the daily church service, it is hard to set definitely, the period of incubation. On February 12th, D. N. (the first case), who had almost entirely finished desquamating, developed a typical vaccination pock at the site of the inoculation made seven days previously.

The cases were all mild, only seven of the thirty being kept in bed more than one day although all were isolated. Although, in several cases the eruption was discovered only because it was being watched for, in others it was markedly abundant. One case in particular showed but seven distinct vesicles, while another child was covered, all over the body, the hairy scalp and genital regions being especially affected. Among these cases, I wish to call particular attention to the fact that *nine gave the history of a previous attack in infancy, all had been successfully vaccinated, several of them twice, and fifteen within eight weeks by myself.*

### Four cases are worthy of especial consideration:

*Case I.* E. V., aged seventeen, very blonde, successfully vaccinated, December 12th, 1900. Gave a history of varicella in infancy. On February 13th, 1901 had a mild attack, twenty-three small vesicles, mostly on trunk and abdomen, no temperature, rapid and uneventful recovery. On March 5th, (twenty days from the other attack), she complained of feeling tired and had a temperature of 99.4°F. The following day, with a normal temperature, she showed nearly a hundred typical vesicles, many of them on the hairy scalp, one on the face, two on the forehead, none on the hands or feet. Many were umbilicated, and all examined were multilocular. None had areolæ. On March 14th, desquamation was complete, no scars being left.

*Case II.* P. W., brunette, aged sixteen, successfully vaccinated in infancy and again at 10 years, unsuccessfully on December 11th, 1900. She gave a history of varicella in infancy. On February 11th, awakened in the morning with a well marked vesicular eruption, twelve of the vesicles being on the face; no fever was observed and the only general symptom was the very distressing itching, and as a result of scratching, she was left with three well marked scars. Her recovery was rapid and uneventful, the desquamation being especially rapid. On March 5th, (twenty-two days from the previous attack), she complained of back-ache, head-ache and a general malaise. Temperature, 101.2°F. On the morning of the next day she showed a few vesicles on the abdomen and a scarletinaform rash on the chest, back and thighs, temperature, 102.7°F. By evening her entire body was covered, with vesicles, many of them on the hairy scalp. A great many of the vesicles were surrounded by an areola; temperature, 99.0°F. The itching was again intense. The following morning the temperature was 98.0°F. and many of the vesicles had become sero-purulent and umbilicated, and pricking showed them to be multilocular. Large crusts formed, which dried and were cast off about March 11th to 15th.

*Case III.* M. G., decided blonde, age seventeen. She gave a history of successful vaccination in infancy and of successful vaccination in December, 1900. Also of varicella in infancy. On February 13th at 10:30 A. M., had a marked scarletinaform rash on back, chest, abdomen and inner surfaces of thighs. No temperature or other general symptoms. At 1 P. M. she had twenty-one well marked vesicles on chest, abdomen and back, the rash having disappeared. I saw her again at 6 P. M., when the vesicles were so many that counting was impossible. Most of these vesicles aborted, but a few went on to maturity and were distinctly umbilicated and multilocular. On March 4th, (nineteen days from the previous attack), with no premonitory symptoms, having been apparently free from both rash and eruption at breakfast time, she was seized with severe pain in her back, head and legs, the head-ache being frontal, vomiting and chilliness; temperature 103.1°F., pulse 120, skin dry, face flushed. A marked scarletinaform rash was observed in patches on the abdomen, chest and back. The following morning the temperature was 101.2°F. and the rash had disappeared. At 6 P. M. the temperature had dropped



to 99.8°F. On the morning of March the 6th, a number of rose-red macules appeared on the face and forehead, the temperature having fallen to 99.0°F. By evening the entire body was covered with macules, many of which had now become vesicular and a few, papular, temperature having arisen, 0.3°F. On the following day there was but little change, the morning temperature being the same and the evening temperature, 100.0°F. On the eighth, (the next day), the temperature rose again to 104.2°F at noon and many of the vesicles were filled with a sero purulent fluid. Some of the vesicles aborted, some were umbilicated, all examined were multilocular. Many of them were on the flexor surface of the forearms and three were in the palm of one hand and one in the other. The itching was not pronounced. The general symptoms, which had disappeared with the subsidence of the initial fever, now returned with renewed intensity. The patient's eyelids were swollen so that it was almost impossible to open them. On March 9th, the highest temperature was 102.3°F. The swelling of the face was increased, many of the vesicles had become pustular, others were drying up, others vesicular, some papular, all forms existing at the same time. The patient was a pitiable object indeed; her face a mass of maturing sores, scabs, and vesicles. The next day the temperature fell to 100.0°F. By March 11th, many crusts had formed, and the temperature did not get above 99.1°F. The following day it was normal, desquamation commenced and the patient went on to convalescence and uninterrupted recovery. Seven distinct scars were left, two of which were on the forehead and one on the temple.

*Case IV.* M. L., aged eighteen years, six months. She was large, well developed and a very marked brunette. She gave a history of successful vaccination in childhood and also on December 12, 1900. She had varicella in infancy and on February 13th, 1901, a mild attack, with thirty vesicles, only four of which matured, no fever or general symptoms. On March 5th, 1901, twenty-two days later, she had a marked chill, nausea, vomiting, frontal head-ache and pain in the lumbar region. A slight rash was noticed in the region of each axilla. Temperature 103.3°F., pulse 112. March 6th, morning, temperature 104.0°F., pulse 130; a few macules were to be seen on the forearms and chest; in the evening the temperature was 102.1°F., pulse 96 and there were many macules, fairly well distributed all over the body. March 7th. Some of the macules had disappeared, some had become vesicular, especially on the abdomen and a number papular on the forearms (flexor surfaces), and forehead; these latter as well as many of the vesicular ones were surrounded by distinct areolæ. The hairy scalp was a mass of vesicles, temperature 100.4°F. March 8th. The only general symptom was the itching and the temperature was now 100.0°F. The vesicles were filled with a clear fluid. March 9th. Temperature 103.1°F., face swollen, eyelids nearly closed, itching less, frontal head-ache, nausea, marked uneasiness at times, followed by drowsiness. The vesicles now showed umbilication, were distinctly multilocular and their contents had become sero-purulent; by evening the temperature had reached 104.3°F. March 10th. The contents of many of the vesicles had become purulent, although, side-by-side and in close approximation, could be seen, macule, vesicle and pustule, and in two places, papules. Two

papules were found on the sole of one foot and one on the other; these latter all aborted. Temperature 102.4°F. in the morning, 101.0°F. in the evening. She made a rapid and uneventful recovery, desquamation setting in on March 14th, the seventh day. Several pits were left on the legs and a very large one on the neck at the roots of the hair, where an unusually large vesicle developed, afterwards becoming purulent.

These four cases were seen in consultation by Dr. F. C. Curtis (dermatologist of the N. Y. State Department of Health), who concurred in my diagnosis of varicella.

In all of my research, I have been unable to find an author who speaks of cases recurring within twenty-one and twenty-two days, and the only reference to recurrence is in Gibson's Practice, where he says: "So-called relapses are probably examples of recurrent crops of rash." When the type of eruption and the secondary fever are remembered, it can be readily believed that I was alarmed, there being then cases of smallpox in Albany; I was reassured, however, by Dr. Hun, who has had recurring cases in St. Margaret's House. Of course the vaccination history in the two more severe of the four cases, would seem to preclude smallpox, but the situation was anything but desirable, I can assure you.

It is a curious fact that one of the best known authorities in the United States, the author of a text-book for students, devotes but ten lines to the diagnosis of varicella and but one and a half pages to the entire subject. This same author gives over three pages to mumps. Another, almost as well known, gives less than a page to varicella, three lines to its diagnosis, two and a half pages to mumps and ten lines to its diagnosis. Still another, after nearly a page of exhaustive (?) study of the subject, dismisses the diagnosis with the following: "The diagnosis should not detain one long. The trifling constitutional disturbances, the rapid, almost sudden, developement of the *pustules*, the *absence of umbilication*\* and areolae, all distinguish the disease from true smallpox." One of the foremost writers on children's diseases devotes the enormous sum of two and one-fourth pages to varicella and five and a half to mumps, while a widely known and justly distinguished authority on skin diseases, in a work of several volumes, devotes less than two pages to the subject, while he gives to that highly contagious, very dangerous and

\*The italics are mine.

much dreaded disease, rubeola, a little more than twice that amount.

In closing, I wish to say that in the earlier part of this paper, I have quoted freely from many authorities, frequently verbatim, and I wish now to express to them my appreciation and thanks, and to acknowledge to them my indebtedness.

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### THE SURGICAL TREATMENT OF MALIGNANT AND NON-MALIGNANT DISEASES OF THE STOMACH

*Abstract of paper read at the meeting of the Herkimer County Medical Society, Herkimer, N. Y., March 3, 1903, and of the Broome County Medical Society, Binghamton, N. Y., April 7, 1903.*

*At the former, Dr. Leo H. Neuman, of Albany, presented a paper on the medical treatment, and at the latter Dr. Andrew MacFarlane, of Albany, on the same subject.*

By ALBERT VANDER VEER, M. D.,

Dean of the Faculty and Professor of Surgery, Albany Medical College

I scarcely think there is any portion of abdominal surgery that has brought to the surgeon, doing work in this department, so much encouragement and satisfaction as the treatment of the so-called surgical lesions of the stomach.

The time is not so far distant since the surgical treatment of lesions of the pelvis, of the right iliac region, and of what has

been called gall-bladder surgery, were looked upon as serious problems, yet they have been solved, and recognized operations now presented to the profession at large, and to the public, in such a way as to command their confidence, also the willingness of the patient to undergo any operation being demonstrated daily.

Traumatisms of the stomach have presented brilliant recoveries through all the various decades of surgery. Gradually non-malignant growths have been brought under the control of the surgeon, but it is in the malignant type, more particularly, that a recent much more substantial progress has been made. Cases are now approached, and proper diagnosis made of the condition present, such as malignant growths, sufficiently early so that the operator can render surgical relief, and the patient go on to recovery or a prolonged life of great comfort.

Non-malignant diseases of the stomach are much more easily recognized and diagnosed to-day than ever before, and the surgeon is constantly being aided by the general practitioner. The physician's own diagnostic skill is constantly becoming more perfect so that the surgeon can approach these conditions at an early date, and with a degree of confidence that brings recovery to our patients, in so large a percentage of operations.

In the study of malignant growths it is within our own sphere of work that to such men as Dr. Neuman, Dr. MacFarlane and others, who are making a specialty of diseases of the stomach, from a medical standpoint, that we derive our greatest assistance. The investigations made by them have been of great help, and I look forward to the time when I believe it will be possible, in our combined efforts, to make a diagnosis sufficiently early so that as surgeons we can operate before the disease has advanced to the danger line.

Ever since such an impetus was given to stomach surgery, a period of a little more than one decade, the term exploratory incision has been made use of at times, and its employment in locating obscure trouble of the stomach has resulted in much good. It can be said that exploratory incision has accomplished much in diagnosis, and much will result in the future from this being employed more frequently than it has been in the past, yet as our methods become more perfect, and we are able to lessen our number of doubtful cases, it is very apparent that we will be permitted to approach our cases with a greater degree of certainty as to what we are to do than heretofore deemed possible.



To Illustrate Dr. Vander Veer's Article on "The Surgical Treatment of Malignant and Non-Malignant Diseases of the Stomach,"  
*Albany Medical Annals, October, 1903*

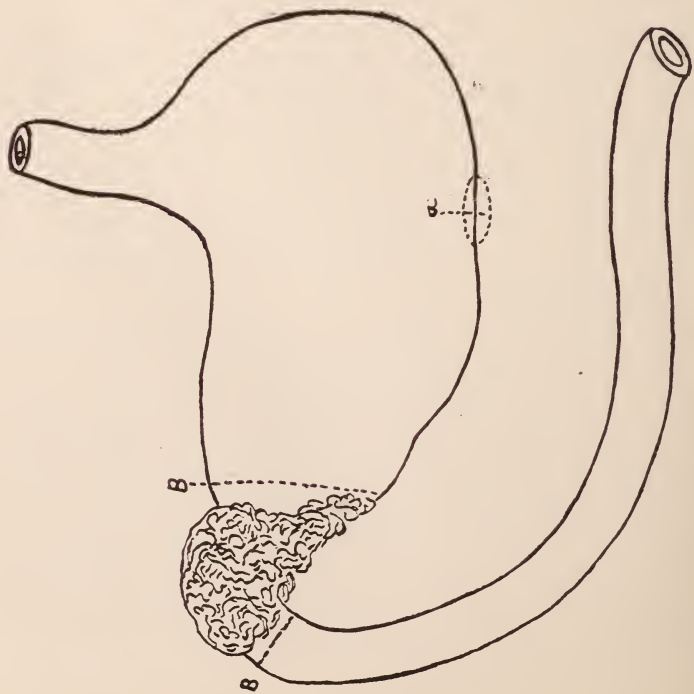


PLATE I

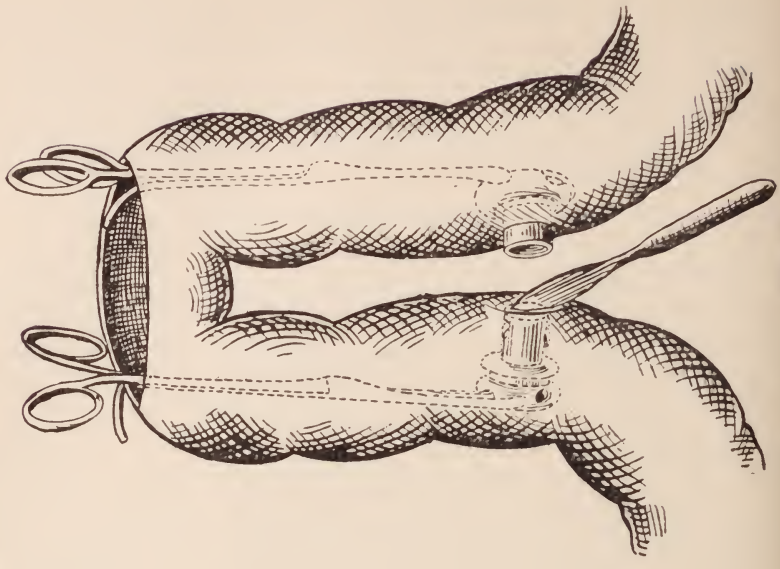


PLATE II

Physicians who are not conversant with abdominal work are often very reluctant in permitting their patients to come under this method of diagnosis, but more and more it is being realized that a simple exploratory incision, at the proper time, is presenting a mortality that is almost nil; therefore, I would say that this is a point upon which to dwell, and that the medical profession at large have this to consider in their serious cases of stomach difficulties, in which a diagnosis has not been reached, and in which the patient is receiving no benefit from medical therapeutics.

As the cases of diseases of the stomach are reached earlier, so will resection for cancer become more and more successful. The new methods employed in the study of surgical lesions of the stomach, compared with but five or ten years ago, give a most decided addition to our knowledge of the subject. We approach a case now with a proper understanding of the term congenital atresia or of stenosis of the pylorus.

Medical writers have described very earnestly the pathological changes and location of the stomach, and as an illustration the term gastropstosis brings to the mind of the surgeon a condition in which he realizes that surgical intervention is to be of great help to the patient.

To one whose recollection of abdominal surgery goes back as far as my own, I remember with satisfaction the distinct terms that were given us at one time, now classified as gastrostomy, gastrotomy and gastrectomy, all meaning a separate line of work, and each suited to its own particular case.

We have for many years read of the marvelous number of foreign bodies removed from the stomach; we have observed the progress made in the operation of opening the stomach to find present a fibroma, a pedunculated form of tumor, a foreign body, in the nature of deposits of phosphates, or other chemical conditions, the accumulations of hair, or other substances, the removal of which has brought about such brilliant results in the recovery of the patients.

I shall ever remember, when visiting Dr. Murchison's clinic, years ago, his presentation of cases of malignant growths, that had resulted in fistulous openings, and through this fistulous tract, in imitation of Beaumont's celebrated case, the patients were being fed. At the present time I scarcely know of a more pleasing and satisfactory operation than that of opening into the

stomach, inserting a tube, and feeding the patient in this manner, when all access has been closed from the cardiac end upward. To see a patient improve in health in this way, to gain in flesh, to be more contented with life, is one of the pleasures of operative surgery.

Exploratory incisions have stamped upon surgical literature the names of certain operators, and many of us here present will call to mind how much at one time was expected from the so-called Loretta's operation, *i. e.*, incision and then distension of the pyloric end of the stomach, yet its results frequently caused hæmorrhage and peritonitis, and now a procedure almost obsolete, because of the more recent advanced methods, the same also to be said of Hahn's operation. Then again we have the term Bernay's operation for opening the stomach and cleaning and curetting out malignant growths from within. This in itself is not likely to hold a place in surgery, because of more permanent good to result from a gastrointestinal anastomosis.

Billroth's brilliant operation of pylorotomy and Senn's operation of gastrostomy being progressive steps towards a better classification, and a more solid presentation of facts for the operator of to-day to make use of. It is by means of the exploratory incision even yet that we are to approach the stomach and to be ready to do such an operation as pyloroplasty-resection of the stomach; gastro-gastrostomy, gastroplication, gastrectomy, or that one operation which I believe to-day to be the leading one, *i. e.*, gastro-enterostomy, an operation that is likely to relieve gastroptosis, stenosis of the pyloric end of the stomach, and to afford more permanent relief to the patient, in inoperable malignant growths, if not to cure, than any other method known at the present time, either medical or surgical.

If we look into the pathology of gastrorrhagia very carefully we will find that it is only since the advances in surgery have demonstrated the feasibility and safety of exploring the abdominal cavity, that the question of surgical treatment of hæmatemesis has been a subject that can be discussed with advantage.

When it is borne in mind that gastric ulcer occurs in five per cent. of the community, and that, according to Brinton, Habershon, Muller, Dreschfeld, Lebert and others, the mortality from all causes, in all cases of ulcer is from ten to fifty per cent., it must at once be allowed that the consideration of the subject is

a matter that should claim the attention of the profession to a greater degree than it has heretofore done.

When it is fully grasped that many of the complications can only be dealt with successfully by surgical means, and that even in the mildest cases of gastric ulcer some of the most serious complications, such as perforation and hæmorrhage, may suddenly supervene, I think all will agree with the opinion that physicians and surgeons should, in the treatment of these serious cases, be in closer touch, and have a more perfect understanding, so that valuable time may not be lost when surgical interference is required.

The treatment of perforating ulcer is the one desperate condition that is, at times, relieved by surgical intervention, when medical treatment offers no hope for the patient. I now look forward to the more complete relief of the complication which sometimes presents in surgery of the stomach, *i. e.*, the perigastric abscess, and when we shall approach it in a more intelligent manner, giving greater and greater relief, as our experience becomes more and more accurate.

Some of the most impressive surgery of the cardiac end of the stomach, and of the œsophagus, has been brought about by the operation of gastrotomy, working from below upwards, for the relief of strictures, the confirmation of the diagnosis of suspected malignancy, and possibly of converting the operation into a gastrostomy.

Let me elucidate a little more fully my reference to the term gastro-enterostomy, in its benefit and employment, by some of the plates I here present—more correctly speaking gastro-jejunostomy, a term indicating a new opening between the stomach at some point, and the upper part of the small intestine. This is an operation that is being studied so carefully that new suggestions are constantly being made, and entirely new methods offered. To confirm this statement one has but to think of the work of Mayo, Phinney (see *Proceedings of the American Surgical Association*, held in Albany, New York, in May, 1902) and others, presented during the past year. The more one studies Phinney's operation the more one becomes impressed with the belief that it is a valuable addition to our surgical knowledge, and is destined to become a well-recognized procedure in this line of work. It appears complicated, but its results are ideal.



To Illustrate Dr. Vander Veer's Article on "The Surgical Treatment of Malignant and Non-Malignant Diseases of the Stomach"

*Albany Medical Annals, October, 1903*

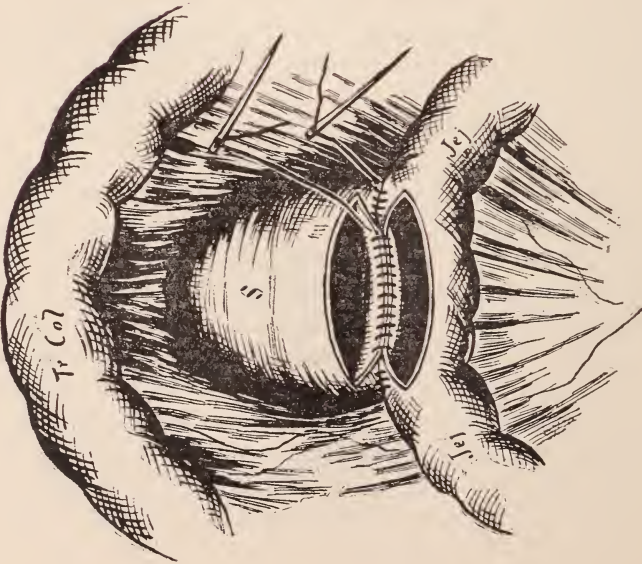


PLATE III

POSTERIOR GASTRO-ENTEROSTOMY SHOWING SUTURE OF JEJUNUM TO STOMACH, A FOLD OF WHICH HAS BEEN DRAWN THROUGH THE SLIT IN THE TRANSVERSE MESOCOLON

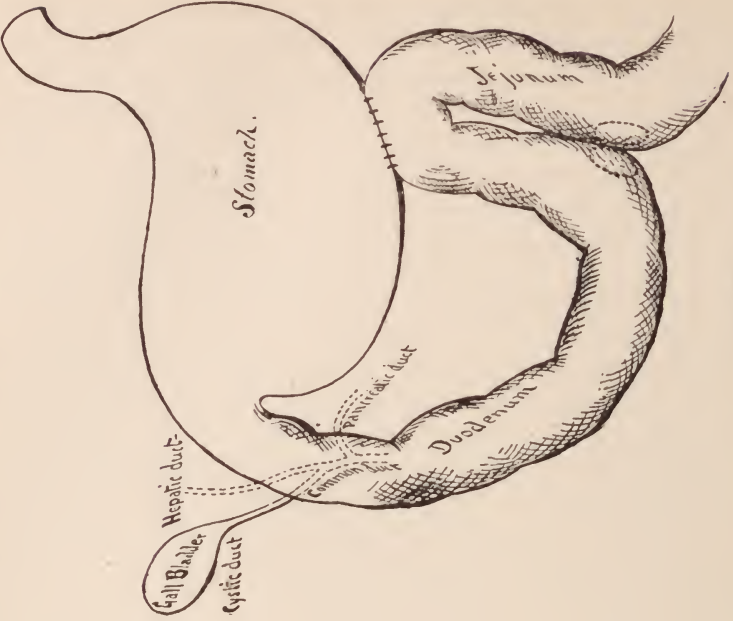


PLATE IV

GASTRO-INTESTINAL ANASTOMOSIS

Plate I illustrates a schematic drawing of malignant growths, where, if possible, resection should be done, but if the adhesions are serious, and invasion of the lymphatic tract too great to admit of complete removal, then the safer operation of gastro-jejunosomy should be done. The latter operation does not exhaust the patient so seriously, and the immediate mortality is certainly less. Having once decided upon the operation of gastro-jejunosomy there are certain steps to be followed which my experience leads me to endorse and place on record. I like, in all my abdominal work, not to handle the peritoneum any more than is really necessary, therefore, I try quietly and slowly to find the duodenum, then the upper portion of the jejunum, as near to the duodenum as possible, letting the distance between where I am to make the opening in the stomach, and where I am to place the Murphy Button in the two portions of the jejunum, average from ten to twelve inches; then making the incision a free one in the superior portion of this loop of the jejunum, it takes but a moment, with forceps, to introduce the two portions of the Murphy Button, as seen in Plate II, when the peritoneal surface of the intestine is made tense with cylinder of button, pricking with sharp point of scalpel, introducing handle in slit, the intestine is easily slipped over; then closing, and only occasionally using Lembert's suture, I bring loop out through incision and let the same rest upon gauze, or wet, soft towels, so as to avoid any possible soiling of the peritoneum, I proceed with the further steps of the operation. Should the patient be one in which procrastination has taken away the best of chances, very weak and time an element to be seriously considered, then I bring at once into the field of operation the anterior wall of the stomach, and proceed to do the anastomosis as quickly as possible by the continuous silk suture. I can now do this operation almost as quickly as using the Murphy Button. At first I did use the button, but its occasional non-appearance has led me to abandon it in this stage of the operation. If conditions will permit I much prefer to make the anastomosis with the posterior wall of the stomach (see Plate III). Making the opening in the transverse mesocolon takes but a moment and little time lost in finding the portion of posterior wall most desirable for the operation.

I am sure that in this way we secure much better gastric drainage, and that when this is accomplished there is no development of the so-called vicious circle.

Plate IV (Schematic) shows the operation as completed.

In my early operations, with and without the use of the decalcified bone plates, I did not make the anastomosis between the portions of the jejunum and frequently the patients would suffer from intermittent vomiting.

When the tract is so continuous from the opening of the bile and pancreatic ducts into the dependent portion of the jejunum this scarcely ever occurs. At the point where the Murphy Button is inserted the adhesions, in a short time, become very firm and the opening shows little evidence of contracting, as I have observed years after the operation.

I am indebted to Dr. A. W. Elting, of Albany, N. Y., for the following translation:

*The Results of Operative and Non-Operative Surgery in the Treatment of Carcinoma of the Stomach. A Comparative Study. (Ueber den Verlauf des Magencarcinoms bei operativer und bei nicht operativer Behandlung.)* By PROFESSOR KRONLEIN. *Archiv für klinische Chirurgie*, 67 Band, 3 Heft.

The most important question relative to carcinoma of the stomach is as to whether it can really be cured by the knife of the surgeon, or whether every operation performed for this condition should be considered only as a palliative procedure. The writer presents the results of 284 cases of carcinoma of the stomach, seen at his clinic in Zurich between the years 1881 and 1902. The ultimate result of all but thirteen cases of this number have been obtained and tabulated. Of the 264 cases 197 were operated upon, fifty-three were considered inoperable, and fourteen refused operation. Of the 197 cases operated upon in seventy-three only an exploratory laparotomy was done, in seventy-four a gastro-enterostomy was done, while in fifty a gastrectomy was done. The mortality from operation was 9.5 per cent. after exploratory laparotomy, 24.3 per cent. after gastro-enterostomy and 28 per cent. after gastrectomy. The writer has practiced gastro-enterostomy only in those cases which presented either definite symptoms of stenosis or stagnation of the gastric contents, resulting from motor insufficiency. He calls attention to the fact that this is the position assumed by von Mikulicz and other surgeons of large experience in connection with the stomach. The writer prefers, and in the majority of instances, uses a second type of the Bilroth operation. A very important question to be settled in this connection is the average duration of life in cases of untreated cancer of the stomach. In the writer's cases this appeared to be about twelve and one-half months after the development of the earliest symptoms. In all the cases great care was taken to determine, if possible, the time the earliest symptoms presented, and the period which elapsed before they appeared at the clinic. This averaged about nine months. The average duration of life, after exploratory laparotomy, was thirteen months, after gastro-enterostomy fifteen and one-half months, and after gastrectomy twenty-six and one-half months.

The writer thus concludes:—First, that carcinoma of the stomach without operation results in death in about one year; secondly, that gastro-enterostomy prolongs life on the average, about three months, and, thirdly, that gastrectomy, when followed by recurrence, prolongs life, on the average, about fourteen months. The writer emphasized especially the fact that the average patient who presented at the clinic had practically only three more months to live, nine months of the expected year of life having already elapsed. Twenty-two cases were still alive, nine of gastro-enterostomy and thirteen of gastrectomy. All of the cases of gastro-enterostomy will probably die in the not too distant future; of the thirteen cases of gastrectomy one is well at the end of eight years, one at the end of four years, two at the end of three years, three at the end of two years, and six at the end of one year. The writer believes that advance in the treatment of this disease can be made only in two ways; first, improvement of the technique, thereby lessening the operative mortality, and, secondly, the more radical extirpation of the growth. He does not believe that the technique can be very much improved, but he does believe that the statistics can be greatly bettered by inducing physicians to refer the cases earlier to the surgeon. Operations upon cancer of the stomach must be made popular, both with the physicians and with the laity, and he calls attention to the important and beneficial results which have followed the popularizing of the operation for appendicitis as an instance of what may be accomplished, to a lesser degree, in cancer of the stomach.

Finally, my own conclusions at the present time, based upon a variety and number of operations, are as follows:

1. That gastro-enterostomy can be applied to all kinds and conditions of stenosis of the pyloric end of the stomach.
2. That it is a preferable operation to that of resection of the stomach, in many cases, the immediate mortality being less, and the possibility of the extension of life being quite as great, with as much comfort.
3. Next to gastro-enterostomy I believe gastrectomy to be the most reasonable and satisfactory operation, yet this operation will necessarily be limited to but few cases. \* In doing it great attention should be paid to removal of the lymphatic glands, as in this rests much of the permanent success of the operation, and non-return of the malignant growth.



## Editorial

This sweating sicknesse was a disease that a man might catch and neuer goe to a hot-house. Many masters desire to haue servants as would worke till they sweat againe, but in those dayes he that sweat neuer wrought againe. That Scripture was not so necessarie, which says, earne thy living with the sweat of thy browes, for then they earned their dying with the sweat of their browes.

\* \* \* \* \*

Phisitions with their simples, in this case were simple fellowes, and knew not which way to bestir them. Galen might goe shoo the gander for anie good he could doe, his secretaries had so long called him diuine, that now he had lost all his vertue upon earth. Hippocrates might well helpe Almanack makers, but here he had not a word to saie, a man might sooner catch the sweate with plodding ouer him to no end, than cure the sweat with any of his impotent principles. Paracelsus with his spirit of the butterie, and his spirits of minerals, could not so much as say, God amend him, to the matter.

THOMAS NASH.

*The Unfortunate Traveler.*

1594.

Albany Medical  
College:  
Seventy-third  
Session

The Seventy-third Session of the College was opened on September 22d in the usual manner, by assembly of the faculty and students in the amphitheatre, to listen to a formal address by a member of the faculty and informal remarks and announcements by the Chancellor of the University and the Dean. The attendance was large, and the indications pointed toward an active year of College work. An incident of the day beyond the usual routine was the presentation of a portrait of the late Professor James H. Armsby by Professor Hailes.

The signs of continued prosperity of the School are encouraging, and may be regarded as a response to a demand. Medical education, or more properly, methods of instruction of medical students are in an unsettled state, and the future is not clear. The development during the last few years of a number of richly endowed universities, with curricula leading to the highest scientific attainments, has injected a factor in the problem whose result is not yet determined. The presumption that the smaller and less pretentious Colleges are to be overwhelmed is not yet sustained by the facts. It is

not probable that the old English university scheme of concentration of learning in a few centres, can prevail in a country so vast as the United States, and institutions will continue to exist and maintain and uplift, each in its own community, a local standard of culture which is a power for good. Professor Macdonald, whose thoughtful address was the feature of the day, touched upon this theme in no uncertain tone. In speaking of the mission of medical colleges he said, "It is not the design or the function of medical colleges to develop a series of medical specialists, but to so instruct men that they acquire a comprehensive knowledge of all the departments of medicine rather than an intricate knowledge of any one branch of the science." He pointed to the needs of the small communities, and emphasized the fact that "men who have been compelled to spend seven or more years in professional study, together with a small fortune, are very unlikely to locate in practice in remote country districts, however great the necessities of the community. The very arduous duties of a country practice have little charm for them. They have acquired in the university, besides special professional training, a demand for social intellectual pleasures not to be attained except in the larger cities and towns." The high intellectual attainments developed in the universities are rapidly producing a class of men not loth to constitute what might be called an aristocracy of education. They are needed as teachers and leaders, but they are not always practitioners. In this connection an interesting inquiry might be made as to how many of these men are in general practice and how many are working in limited lines either within or without the universities.

We feel that the Albany Medical College rests secure in the demand for its services and for the practical men it turns out. It grew in response to a demand, and to the more exacting standards of progress has continued to respond. Its history is the medical history of a community, and as such has kept pace with all practical work. We do not look for a reaction from the university idea, but experience shows that both the university and the local college are needed to meet the requirements of all communities in the pursuit of health and happiness.

## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, AUGUST, 1903

*Deaths*

	1901	1902	1903
Typhoid Fever .....	3	3	3
Measles .....	0	0	0
Erysipelas .....	0	0	0
Whooping-cough .....	0	1	0
Diphtheria and Croup .....	2	2	1
Cholera Infantum .....	14	12	9
Consumption .....	18	13	16
Pneumonia .....	0	2	6
Broncho-pneumonia .....	2	2	2
Bright's Disease .....	14	8	12
Apoplexy .....	6	9	6
Cancer .....	6	9	8
Accidents and Violence .....	7	6	5

*Deaths in Institutions*

	1901	1902	1903
Albany City Hospital .....	14	18	9
Albany Orphan Asylum .....	1	0	2
County House .....	6	2	1
Home for Aged Men .....	0	0	1
Homeopathic Hospital .....	2	2	4
House of Good Shepherd .....	1	0	0
Little Sisters of the Poor .....	1	0	2
Public Places .....	3	1	1
St Francis de Sales Orphan Asylum .....	1	0	2
St. Margaret's House .....	6	3	3
St. Peter's Hospital .....	4	6	4

Total number of deaths .....	134	126	148
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Death rate .....	12.96	14.25	17.41
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Death rate, less non-residents, for August, 1903, is 16.35.

Marriages .....	35
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Births at term .....	103
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Still births .....	3
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Premature births .....	3
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Total .....	109
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## WORK OF HEALTH PHYSICIANS.

Total number of assignments made.....	33
Total number of calls made.....	160

## INSPECTIONS.

The market inspector made 81 inspections of markets this month, 5 inspections of slaughter houses, 3 inspections of rendering establishments and 3 inspections of hide houses. 59 pounds of veal and 20 pounds of pork was condemned and destroyed.

In the Bureau of Sanitation, 97 complaints were made to the Department, of which 52 were of privies, 8 of closets, 3 of plumbing, 6 of water, 2 of filthy yards, 2 of filthy alleys, 5 of filthy premises, 9 of manure, 2 of garbage and 1 of stagnant water; 96 inspections were made, of which 21 were plumbing and 75 sanitary; 53 reinspections were made, of which 26 were of plumbing and 27 sanitary; 53 complaints were found to be without cause; 16 nuisances were found on reinspection to have been abated and 1 cleaned. Twenty-seven notices were served during the month.

In the Bureau of Plumbing, 133 inspections were made, of which 83 were of old buildings and 50 of new buildings; inspection was made of 36 iron drains, 15 connections with street sewers, 15 tile drains, 2 urinals, 47 cesspools, 66 wash basins, 62 sinks, 53 bath tubs, 42 wash trays, 4 trap hoppers in yard, 84 tank closets, 7 slop hoppers, 8 shower baths. Ninety permits were issued by the Department, of which 66 were for plumbing and 24 for building purposes. Nine houses were tested on complaint; 5 by the blue, red test and 4 by the peppermint test. Fourteen water tests were made. Seventeen houses were examined on complaint and 19 were re-examined. Twelve complaints were found to be valid and 5 without cause.

## BUREAU OF CONTAGIOUS DISEASES.

*Cases reported*

	1901	1902	1903
Typhoid Fever .....	24	9	11
Scarlet Fever .....	4	5	3
Diphtheria and Croup .....	27	26	10
Chicken-pox .....	0	2	1
Measles .....	1	0	4
Consumption .....	19	0	3

## Fumigations:

Houses.....	14	Rooms.....	43
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## Number of days quarantine for diphtheria:

Longest.....	32	Shortest.....	16	Average.....	23
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## Number of days quarantine for scarlet fever:

Longest.....	41	Shortest.....	23	Average.....	34
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## ANTITOXIN.

Cases of diphtheria in which antitoxin was used.....	8
Cases in which antitoxin was not used.....	3
Deaths after use of antitoxin.....	1

The one death from diphtheria was a male, 8 years, 9 months old, sick 14 days; antitoxin was used on 3d day, complicated with acute nephritis.

## BENDER LABORATORY REPORT ON CULTURES FOR DIPHTHERIA.

Initial positive.....	2	Initial negative.....	8
Tubes spoiled.....	1		
Total .....			11

## CAUSE OF DEATH OF CHILDREN UNDER FIVE YEARS OF AGE.

<i>Age.</i>	<i>Chief Cause.</i>	<i>Contributing Cause.</i>
1 year, 18 days.....	Marasmus .....	Exhaustion .....
10 months .....	Marasmus .....	
2 months .....	Marasmus .....	
6 months .....	Marasmus .....	Malnutrition .....
3 months .....	Marasmus .....	
4 months .....	Atrophia Infantum.....	
8 months .....	Marasmus .....	
10 weeks .....	Malnutrition .....	
6 days .....	Exhaustion .....	Umbilical Hemorrhage..
1 day .....	Asphyxia Neonatorum.....	
½ day .....	Asphyxiation .....	
2 months .....	Malnutrition .....	
3 months .....	Marasmus .....	
17 days .....	Inanition .....	
18 days .....	Inanition .....	
6 months .....	Marasmus .....	
7 months .....	Marasmus .....	
2 months .....	Marasmus .....	
1 month .....	Malnutrition .....	
3 months .....	Malnutrition .....	
13 days .....	Premature Birth .....	
1 year, 9 months.....	Meningitis .....	
21 months .....	Entero-colitis .....	
10 months .....	Obstruction of Bile Duct.....	
3 months .....	Diarrhœa and Enteritis.....	
10 months .....	Gastro-enteritis .....	
5 months .....	Indigestion .....	Diarrhœa and Nephritis.
2 days .....	Heart Disease.....	
8 months, 1 day .....	Inflammation of Lungs.....	
11 months .....	Spinal Meningitis.....	Convulsions, Teething...
6 days .....	Convulsions .....	
8 days .....	Tetanus .....	
3 years .....	General Miliary Tuberculosis.....	
4 months .....	Intestinal Obstruction.....	
8 months .....	Entero-colitis .....	
3 months .....	Infantile Indigestion....	Infantile Diarrhœa .....
4 months .....	Summer Diarrhœa.....	
7 months .....	Cholera Infantum.....	
29 days .....	Enteritis .....	Malnutrition .....

## Medical News

Edited by Eugene E. Hinman, M. D.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR; STATISTICS FOR AUGUST, 1903.—Number of new cases, 55. *Classification of cases*: District cases reported by health physicians, 6; charity cases reported by other physicians, 18; dispensary patients receiving home care, 4; dental, 1; total number of charity cases, 29; patients of limited means, 26; old cases still under treatment, 26. *Classification of diseases* (new cases): Medical, 15; surgical, 4; gynæcological, 2; obstetrical, 17 mothers and 15 infants under professional care; dental, 1; skin, 1; transferred to hospitals, 3; deaths, 4.

*Special Obstetrical Department*: Head obstetrician in charge of all cases; medical students in attendance, 3; Guild nurses, 6; cases, 5. Number of visits of head obstetrician, 25; by medical students, 27; by Guild nurses, 50; total number of visits for this department, 102.

*Visits of Guild Nurses* (all departments): Number of visits with nursing treatment, 776; for professional supervision of convalescents, 201; total number of visits made, 977. Cases were reported to the Guild by the city physician, by two health physicians and by nineteen other physicians.

THE ALBANY GUILD FOR THE CARE OF THE SICK POOR.—The Guild has undertaken to widen the scope of its obstetrical department by taking steps to secure a larger number of cases for treatment and by opening a permanent headquarters at the Guild Headquarters for this department. A letter has been sent to the physicians of Albany urging them to advise their charity patients to apply to the Guild for obstetrical treatment and the care of a graduate nurse. This will give the patients excellent care during confinement and will also increase the usefulness of the Guild as a school of instruction for the students in attendance at the college. A nurse is to be on duty constantly at headquarters where all the instruments and dressings will be sterilized and prepared for instant service, and to whom calls for professional services can be sent at any hour. The names of the obstetricians appointed by the Guild and the recognized ability of the Guild nurses are guarantees for skill and efficiency. It is earnestly desired by the Guild that physicians will give their careful attention to this department and assist in the work by sending cases to it.

THIRD ANNUAL CONFERENCE OF SANITARY OFFICERS OF THE STATE OF NEW YORK.—All health officers and registrars are invited to attend the Third Annual Conference of Sanitary Officers which will be held at the Capitol in Albany, October 8 and 9, 1903. The Conference will be opened by an afternoon session in the Assembly Chamber on October 8th, an evening session following. A morning and evening session will be held on the 9th of October. Arrangements have been made for the delegates to visit the filtration plant of the city of Albany in the afternoon of October 9th. Reduced rates from railroads have been arranged for those attending the Conference at a fare of one and a third. When purchasing tickets request a *certificate* entitling you to reduction on return trip. Cer-

tificates must be procured at *starting point* or nearest station issuing through tickets to Albany.

*October 8, 2:30 P. M.*—1. Comments Upon the Recent Amendments of the Public Health Laws. Hon Sanford T. Church, Deputy Attorney-General. 2. Food Adulteration, Its Nature and Extent. Professor Willis G. Tucker, Director of the Bureau of Chemistry, New York State Department of Health. 3. School Sanitation. Professor O. H. Landreth, Consulting Engineer, New York State Department of Health; Dean of Engineering School, Union University. (Hon. D. E. Ainsworth, Deputy Superintendent of Public Instruction, is expected to discuss this paper.) 4. Care of the Eyes of School Children. Dr. P. A. Callan, Attending Ophthalmic Surgeon, New York Eye Infirmary.

*October 8, 8 P. M.*—1. The Management of Epidemics of Contagious and Infectious Diseases. Dr. J. D. Fulton, of Baltimore, Secretary of the Maryland State Board of Health. 2. The Serum Treatment of Tetanus. Dr. Herbert D. Pease, Director of the Antitoxin Laboratory of the New York State Department of Health.

*October 9, 9:30 A. M.*—1. Management of Typhoid Fever Epidemics. George A. Soper, Ph. D., Representative of the State Department of Health at Ithaca. 2. Prophylaxis of Pulmonary Tuberculosis. Dr. William A. Evans, of Chicago, President of the Cook County Medical Society. To be discussed by Dr. Samuel B. Ward and Dr. Frederick C. Curtis. 3. The New York State Hospital for Tuberculosis. Dr. Willis G. Macdonald. 4. Suggestions to Registrars of Local Boards of Health. T. A. Stuart, Chief Clerk of the State Department of Health.

*October 9, 2 P. M.*—Arrangements have been made for the delegates to visit the filter plant of the city of Albany.

*Evening Session at 8 P. M.*—1. The Protection of the Milk Supply of Cities. Dr. Ernest J. Lederle, President of the New York City Board of Health. 2. Water Purification. Mr. Allen Hazen, C. E., of New York City. 3. Practical Questions in the Destruction of Mosquitoes. Dr. A. H. Doty, Health Officer of the Port of New York.

STATE AND COUNTY CIVIL SERVICE EXAMINATIONS.—The State Civil Service Commission has called examinations to be held October 17, 1903, for the positions of apothecary, chief engineer, steward, teacher, trained nurse, physician (male) and woman physician in State hospitals and charitable institutions, also for guard at Elmira Reformatory, keeper in New York county jail, English examiner in the Regents' office and stenographer, seventh grade (salaries \$1,200 and over). Application for these examinations must be made on or before October 12th. Full particulars of the examinations and blank applications may be obtained by addressing the Chief Examiner of the Commission at Albany.

DENTISTRY IN MEDICAL COLLEGES.—At a recent meeting of the National Dental Association, held at Nashville, N. C., the following resolution was favorably acted upon: "Resolved that it is the sense of the National Dental Association that each Medical College in the United States should include in its curriculum a lectureship on "Oral Hygiene, Prophylaxis and Dental

Pathology.' " The dental professional feels that with the introduction of the teaching of Oral Hygiene in the public schools, which they are striving to accomplish, and the co-operation of medical men who have been specially instructed on this subject, a great stride will have been made in the prevention of caries of the teeth, not to mention many other good results to the general system, which would surely follow a better care of the oral cavity.

**THE TRAINED NURSE AND THE ARMSTRONG LAW.**—The Armstrong Law, recently passed by the Legislature of New York, has given nurses a definite standing. The law does not prevent any person from engaging in the profession of nursing, whether trained or not, but it will protect the physicians of the State and the public from being imposed upon by nurses who claim to be trained nurses and who are not. On June 21, 1904, January 24, 1905, and June 20, 1905, examinations will be held in New York, Albany, Syracuse and Buffalo for all who desire to practice in this State as trained nurses. These examinations are held under the supervision of the State Board of Regents and regular certificates will be issued to successful applicants.

**TYPHOID FEVER AND ITS CURE.**—Experiments are being conducted at Ann Arbor, Mich., to discover a cure for typhoid fever. Six large tanks have been constructed with a layer of gelatine and on these 144 square feet of the typhoid bacillus are grown at a time. When grown the cultures are removed and bottled. The object is, if possible, to extract the toxin from the germ bodies, feed animals with it and endeavor to discover an antidote.

**PERSONAL.**—Dr. JOSEPH MARK (A. M. C. '02), is practicing at No. 115 West 121st street, New York City.

—Dr. JOHN B. CONGDON (A. M. C. '02), has opened his office at 664 Central avenue, Albany, N. Y. Since graduating Dr. Congdon has served as interne and first assistant at the Lee Hospital in Rochester, N. Y.

—Dr. HUGH M. COX (A. M. C. '02), formerly of the Troy Hospital, has opened his office at "Wilmore Court," St. Nicholas avenue, corner 126th street, New York City.

**MARRIED.**—MANDELBAUM—ROSENBERG.—Dr. MOSES J. MANDELBAUM (A. M. C. '02), and Mrs. HANNAH ROSENBERG were married on September 2, 1903, at Albany. Dr. Mandelbaum is practicing at Berne, N. Y.

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**DEATHS.**—Dr. WILLIAM E. ALLEN (A. M. C. '56), died at Scranton, Pa., August 20, 1903, aged 66, of cancer of the bladder.

—Dr. JOHN D. KENYON (A. M. C. '57), died at Westerly, R. I., August 12, 1903, aged 69.

—Dr. NEWTON C. HARRIS (A. M. C. '57), died at Schuylerville, N. Y., August 6, 1903, aged 70.

—Dr. DANIEL B. HOWARD (A. M. C. '65), died at Warrensburgh, N. Y., September 21, 1903.



## In Memoriam

W. E. ALLEN, M. D.

At Scranton, Pa., on August the 25th, 1903, died Dr. W. E. Allen, a graduate of the Albany Medical College in the class of 1856. Dr. Allen was a typical "Doctor of the old school" in his bearing toward his fellow-man, courteous and dignified and extremely kind to all with whom he came in contact, and a doctor of the most modern school in the scientific practice of his profession. He was born in Sussex county, in the town of Wantage, in 1836, the youngest son of Rev. Edward and Elizabeth Allen. He had one brother, Dr. John Allen, who recently died, and is survived by his sister, Miss Elizabeth Allen. He was married, in 1865, to Miss Amelia B. Clapp, who with their daughter, Miss Julia Allen, a talented violinist, also survives him. During the doctor's youth he was in frail health and obtained his education with difficulty, attending Belvidere Academy for awhile and studying under the tuition of his father, especially in the classic languages. When seventeen years of age he began the study of medicine under the direction of his brother, and completed his course at Albany in 1856. Many and interesting were his anecdotes relating to his college career, one being his description of diphtheria to Dr. McNaughton, then raging in New Jersey for the first time in its history, I believe. After his graduation Dr. Allen started to practice at Pike county, Pa. His health not permitting him to undertake the long rides necessary to his practice there, he moved to Hyde Park, Pa. (now Scranton, Pa.), where he continued to practice until his death. During the war of the Rebellion he served in the medical department at Fortress Monroe and at Philadelphia, and after the termination of the war resumed his practice at Scranton. His health finally improved and he was able to build up a very large and prosperous business and without any doubt became the most famous physician in his locality. He was physician and surgeon to the Lackawanna Hospital at Scranton in its early history. He was the first physician appointed to the Moses Taylor Hospital at Scranton, Dr. Leet, a colleague, being the first appointee, and filled it as surgeon. Dr. Allen was also on the staff of the West Side Hospital of Scranton, this hospital being in the old Hyde Park district. In 1886 he was appointed health officer and filled the position for fifteen years, and was then appointed commissioner of Public Health of Scranton and served one year. Dr. Allen's regard for the Albany Medical College was pronounced and his esteem for the faculty of his time very great. He had several students from time to time to all of whom he suggested attendance at the Albany Medical College, many of them doing so. He spoke frequently of visiting his Alma Mater, but unfortunately some unforeseen circumstance would prevent him. Dr. Allen died loved by all who knew him, and his death will be mourned for many years by his many friends, colleagues and students, and not the least by the humble subscriber. THOMAS W. JENKINS.

## REUBEN BARNEY, M. D.

The funeral of Dr. Reuben Barney occurred Monday, July 20, 1903, at his home in Chillicothe, Mo. Dr. Barney was born April 20, 1844, in Arlington, Vt. He was prepared for a collegiate education in private schools and was graduated from the Albany Medical College with the class of 1865. He served in the medical department of the United States Army during the Civil War, and after the close of hostilities removed to Missouri and located in the city of Chillicothe in 1868. During his residence there Dr. Barney was foremost in everything which was for the welfare of the community, and in addition to his prominence in medical circles he was active in the social, religious and fraternal life of the community and State. During the time of his funeral, by a proclamation of the mayor, all business was suspended and the city was indeed a city of mourning. It was a silent testimony of the high regard in which the deceased was held in the community.

## JOHN D. KENYON, M. D.

Dr. John Denison Kenyon, of the class of 1857, passed away August 12, 1903. Dr. Kenyon was educated at the DeRuyter Institute, DeRuyter, N. Y., and pursued his medical studies at the Albany Medical College, from which institution he graduated December 22, 1857. He began his practice at his father's old home in Hopkinton, but soon removed to the town of Ashaway. A few years later he removed to Westerly, R. I., where he remained until his death. He was a member of the New York State Medical Association and of the Washington County Medical Society. Dr. Kenyon was a kind and loving husband, a gentle and patient physician, and will be sadly missed by many outside of his own family circle.—*The Sun, Westerly, R. I.*

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## Book Reviews

*A Practical Treatise on Materia Medica and Therapeutics.* By ROBERTS BARTHOLOW, M. A., M. D., LL. D.; Professor Emeritus of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia; Formerly Professor of Materia Medica and Therapeutics and of the Practice of Medicine in the Medical College of Ohio; Fellow of the College of Physicians of Philadelphia; Member of the American Philosophical Society; Honorary Fellow of the Royal Medical Society of Edinburgh; Honorary Member of the Société Médico-pratique de Paris, and of Various National, State and County Medical Societies. Author of a Treatise on the Practice of Medicine; of a Treatise on Medical Electricity; of a Manual of Hypodermatic Medication; of the Russel and Jewett Prize Essays, and Prize Essays of the American Medical Association and of the Rhode Island Medical Society, etc. Eleventh Edition, Revised and Enlarged. Pages, 866. New York and London: D. Appleton & Company. 1903.

Some twenty-seven years ago Dr. Bartholow, in his preface to the (then) first edition of his work on *Materia Medica and Therapeutics*, said: "To

offer to the medical profession a new treatise on *Materia Medica* and *Therapeutics* may appear to be a labor of supererogation." So to review a work which has passed through ten editions, one written by so distinguished a man as Dr. Bartholow, "may appear to be a labor of supererogation" too. There are, however, so many points of excellence about this recent edition and so few faults that one can not refrain from calling the attention of the profession to some of them.

The article on prescription writing is entirely new, very terse, and will be easily understood by the beginner, but in this the author makes the same error that most writers on this subject do, that is, he makes the student think in Troy weight and translate this again into the Metric, evidently overlooking the fact that if one becomes really proficient in writing the Metric system, he must "think Metric," just as one must "think" any language in order to speak it fluently.

While the author has departed from his custom in the previous editions of excluding most of the newer and unproved drugs, it is a pleasure to note how little he has succumbed to that craze which seems to have infected so many authors of the present day, the exploitation of synthetic products whose possibilities for both good and bad are, as yet, so little known.

The articles on Animal Extracts are, to say the least, conservative; in fact, with the exception of the one on thyroid extract, they may be said to "damn with faint praise." The article on diphtheria antitoxin is more notable for what it leaves unsaid than for what it says, making no recommendations, either for or against its use, and giving no statistics whatsoever as to the marvelous lowering of the death rate in diphtheria since its introduction.

The article on electricity is well written, concise and clear, giving descriptions of apparatus and methods of application which can not fail to be understood and to prove of value to the practitioner.

In the very readable article on bromoform, Dr. Bartholow calls attention in no uncertain terms to the utility in the treatment of whooping-cough of this most valuable but much neglected remedy; he goes further, however, than most authors in recommending its use in the cough of phthisis and in asthma and other spasmodic diseases, and but few of us will care to ascribe to it the same value in reflex headache and vertigo, and in hepatic colic that he does.

In the preface a much-needed warning is sounded in the following words: "I have not been unmindful of the present tendency of pharmacological literature. An increasing disposition is discernable to develop the physiological side, to enlarge the domain of experimental work, and to interpret conditions in man by hasty and sometimes crude observations on inferior animals. On the other hand, empirical knowledge, supported by careful clinical work and improved by sound induction, should continue to be an important element in the structure of any therapeutical system."

Dr. Bartholow, in this, his latest edition, has evinced the same care and study that has characterized the previous ones, and while the same general form is preserved, the new matter will add much to the name and fame of the author, while the work will prove of much value both to the student and to the practitioner.

S. L. D.

*The Surgery of the Head.* By BAYARD HOLMES, B. S., M. D.; Professor of Surgery in the University of Illinois; Professor of Clinical Surgery in the American Medical Missionary College, Chicago; Attending surgeon, Chicago Baptist Hospital. New York: D. Appleton & Co. 1903.

This volume is one of a series of books on practical surgery which has been for a long time in the course of preparation and which reflects the more mature experience of the author. It contains 579 pages of subject matter, which is divided into nineteen chapters. The surgery of the eye, ear, nose and throat is not considered, but the work is rather devoted to those phases of the surgery of the head which interest the general practitioner and the general surgeon.

Chapters I and II cover the congenital malformations of the head, mouth and face, and include a discussion of hydrocephalus, microcephalus and hypertrophies.

Chapter III treats of injuries of the head and face; and Chapters IV, V, VI and VII are devoted to fracture of the skull and its sequelæ, including a most excellent treatise on cerebral localization, concussion, contusion and compression of the brain, as well as abscess of the brain.

Chapters VIII, IX and X are occupied with a careful consideration of otitis media and its frequent sequel, otitic abscess of the brain, as well as sigmoid sinus thrombosis, and extra-dural abscess.

Chapter XI treats of tumor of the brain and forms one of the most valuable chapters in the work.

Chapter XII contains a general consideration of epilepsy, pachymeningitis, insanity and cerebro-spinal meningitis in their relations to general surgery.

Chapter XIII is devoted to empyema of the accessory sinuses of the nose; while Chapter XIV presents the surgical features of diseases of the parotid gland.

Facial neuralgia is the subject of Chapter XV, and the surgical phases of this unfortunate condition are adequately considered.

The very important subject of carcinoma of the tongue is discussed in Chapter XVI; and Chapters XVII and XVIII are devoted to infectious diseases and tumors of the face and scalp.

The volume closes with a chapter on the surgical diseases of the orbit.

While by no means an exhaustive work on the surgery of the head, this book has many strong points which should especially recommend it. In the first place, every subject is treated in a concise and adequate manner, and verbosity is always avoided. The discussion of each important subject is concluded with a brief statement of certain more or less axiomatic truths which sum up the condition. In the second place, every important condition considered is illustrated by the presentation of one or more characteristic clinical histories, either from the author's personal experience or from the literature. In the third place, the methods of treatment advocated are, as a rule, the best known to modern surgery; and, finally, the volume contains many references to the best literature available.

There are ninety illustrations in the text, with fourteen plates, most of which are fairly well executed. This work certainly presents a substantial contribution to the literature of this important department of general surgery.



*Gynecology.* A Text-Book for Students and Practitioners. By WILLIAM R. PRYOR, M. D., Professor of Gynecology in the New York Poly-clinic Medical School; Attending Gynecologist New York Poly-clinic Hospital; Consulting Gynecologist St. Vincent's Hospital, New York City Hospital and St. Elizabeth's Hospital; Member Fondateur Congress International de Gynecology et d'Obstetrique; Fellow of the American Gynecological Society; Fellow of the New York Academy of Medicine. Illustrated with One Hundred and Sixty-three Engravings in the Text. New York and London: D. Appleton & Company. 1903.

It is almost impossible to keep pace with the numerous works on Gynecology which are appearing so frequently and yet we are always glad to welcome any new work of merit.

Dr. Pryor has given us a book which covers strictly gynecological subjects without going into detail in the description of the more rare conditions which one seldom meets with, while much space is given to a full discussion of the more common diseased conditions. The absence of the usual chapters on bacteriology and on minute and gross anatomy is noted,—a proper omission in such works as it is not the province of a gynecologist to illustrate the findings of the microscopist or of the anatomist.

In Chapter I, under "Examination of the Patient," the author's position is described. This is not so often employed for examination of the genitalia as for operations and for inspecting the bladder. The patient is in the lithotomy posture and the head of the table is lowered to an angle of forty-five degrees. It requires a special table to obtain the best results from this posture, but it may be secured, though with some inconvenience, by using any of the tables which admit of Trendelenburg's position.

Chapter III, on the subject of distortions and displacements, is especially good. The author correctly says: "Too much emphasis can not be laid upon the importance of trying the pessary before resorting to any of the suspension operations. There is too great a tendency in the profession to perform operations for retro-displacements without employing less severe measures first." Reposition by the sound is mentioned only to be unqualifiedly condemned. Too much space is given to Alexander's operation, especially since the author does not endorse it, while no mention is made of Webster's operation for retrodeviation, which, we believe, is of considerable utility in selected cases. The author's individuality crops out especially in the chapters on "Vaginal Section" and "Hysterectomy for Pelvic Disease." This work is an excellent one for students and, as considerable prominence is given to non-operative as well as to operative treatment, it will be of special value to the general practitioner.

H. JUDSON LIPES.

*Manton's Obstetrics.* A Manual of Obstetrics for Students and Practitioners. By W. P. MANTON, M. D.; Adjunct-Professor of Obstetrics and Professor of Clinical Gynæcology, Detroit College of Medicine. In One 12mo Volume of 265 Pages, with Eighty-two Illustrations. Philadelphia and New York: Lea Brothers & Co., Publishers. 1903.

This little work is just what it was intended to be: an inexpensive volume covering the subject of obstetrics in all its essentials without unnecessary theoretical discussions and well adapted for the use of students, not as a senior text-book, but for a thorough review of the subject in the least possible time. In books of this description the continuity of the text is usually broken by the arrangement of the subject matter under questions and answers, but in this series the questions have been gathered at the end of each chapter,—a new and more improved arrangement.

This volume can be heartily recommended to the practitioner as well as to the student who wishes to review the subject of obstetrics.

H. JUDSON LIPES.

*The American Journal of Orthopedic Surgery.* The Official Publication of the American Orthopedic Association. Editorial Committee: R. W. LOVETT, M. D., Boston; B. E. MACKENZIE, M. D., Toronto; HARRY M. SHERMAN, M. D., San Francisco. Volume I, August, 1903; No. 1.

In this day, when medical journals have become so numerous and in so many instances of such little theoretical or practical value, a new publication does not ordinarily arouse much interest or enthusiasm. The appearance, however, of a journal devoted exclusively to orthopedic surgery, the only one of its kind in the English language, is most timely.

It is now several years since the *Zeitschrift für orthopädische Chirurgie* first made its appearance, and the success which it has enjoyed has proved that there was a great field on the continent for such a publication. The rapid strides which orthopedic surgery has made in America during the past few years certainly entitles this department of medical science to an organ of its own.

Among those who have not enjoyed membership in the American Orthopedic Association there has been for some time a growing desire that the transactions of this society should be made more available for general reference, and this now seems to be assured by the statement that the *American Journal of Orthopedic Surgery* is to appear quarterly and to replace the Transactions of the American Orthopedic Society. It is also to be inferred that in the *Journal* will appear all papers presented before the society, as well as others devoted to this branch of surgery.

Number 1 of Volume I makes its appearance in a most attractive form. The articles are all of them of unusual merit and illustrate upon what a high plane American orthopedic surgery has established itself. A valuable feature of this journal is the publication of careful abstracts of the more important articles from the literature of orthopedic surgery, which will

thus enable one to follow the literature of this department of surgery with comparative ease.

The attainments and reputation of the committee upon publication bespeak the maintenance of a high standard of excellence, and the *Journal* should receive the cordial support of all who are in the least interested in orthopedic surgery.

ARTHUR W. ELTING.

## Current Medical Literature

### MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

*Pure Urea in the Treatment of Chronic Pulmonary Tuberculosis; with a Note on the Action of Urea.*

S. VERE PEARSON. *The Lancet*, Nov. 22, 1902.

The author confines himself to the observations made a year ago while acting as house physician to the Brompton Hospital for Consumptives. The patients were not all of the same type. They varied in age, build, temperament and in the stage of the disease.

*Case 1.* Male, aged twenty-seven years. Build, muscular. Entered the hospital May 24, 1901. Had complained for eighteen months. Had four attacks of hæmoptysis in that time. Infiltration of the left apex was found. Pulse, seventy-two and normal. Temperature never reached above 99.4°F. Expectoration scanty. At the end of a month his condition showed no improvement. June 25 he was given twenty-grain doses of pure urea three times a day. The dose was gradually increased so that on July 15 it was sixty grains three times a day. This he took with no inconvenience, up to August 16, when he left the hospital. His weight remained the same. His temperature varied, throughout, from 97.4°F. to 99.4°F. The pulse became more frequent and his appetite did not improve. July 18, submucous rales appeared at the right apex and remained up to his leaving the hospital. Expectoration increased. His strength did not improve and his anæmia increased. He had taken sixteen and one-half ounces of pure urea in fifty-one days.

*Case 2.* Male, aged thirty-four, was admitted to the hospital June 20, 1902. Had had cough for three months. His temperature was 102°F. The right lung was quite badly affected. Pulse eighty and normal. At first, his condition was improved but his temperature still varied from 98°F. to 101°F. June 26, was given twenty-grain doses of urea three times a day. The dose was gradually increased to forty grains. He had taken fifteen ounces in fifty-eight days, had gained seven pounds and his pulse had increased to ninety-six. Urea was stopped August 22. He remained one month longer and gained five pounds.

*Case 3.* Male, aged thirty-five years, was admitted to the hospital May 15, 1901. Symptoms had been present two years. Both lungs were quite badly affected but all signs pointed to no fatal result within four months at least. On July 4, he was given thirty grain doses of urea three times

a day. He continued this up to August 10. He took seven and one-half ounces in thirty-seven days. Improvement was slight at first but soon he gradually failed. The infiltrations in both lungs increased and he died August 21.

*Case 4.* Female, aged nineteen. Had complained of cough and a weak voice for three months. Was admitted to the hospital April 20, 1902. The apex of the right lung was affected. Pulse 132 and weak. Temperature varied from 97°F. to 101°F. At first improvement was noticed. She gained weight and the temperature was not as high. June 28, she was put on twenty grain doses of urea three times a day. This was gradually increased up to sixty grains. This was discontinued August 16. She had taken seventeen ounces in fifty days and had gained three pounds. Apex of left lung became involved. The voice still remained weak and the temperature continued high. She left the hospital August 24.

*Case 5.* Female, aged forty-eight. Was admitted to the hospital May 20, 1901. Had been troubled for eight years. Both apices were affected. Temperature was normal. June 28, began with twenty grain doses of urea, gradually increasing to forty grains three times a day. This was continued up to July 26. Total amount was seven ounces. No change in the disease was noticed save a slight temperature at night. She gained two and three-quarter pounds and her general condition was improved when she left the hospital, which was August 19.

*Case 6.* Male, aged thirty-seven. Was admitted to the hospital August 30, 1901. Had complained for about a year of cough and loss of weight. Apices of both lungs were affected. The pulse varied from eighty-four to 112. The temperature varied from 97°F. to 100°F. From September 7 to October 11 seven ounces of urea had been given. He left the hospital October 15 and had gained seven pounds with improvement in his general condition. There was no change in the condition of his lungs.

*Case 7.* Male, aged twenty-nine. Entered the hospital September 6, 1901. He had complained for about a year. The right lung and the left apex were affected. The temperature varied from 97°F. to 100°F. Pulse 100, regular but poor in quality. Began with twenty grain doses of urea September 18 which was increased ten grains, up to October 17 when it was discontinued. Patient had gained seven pounds but the expectoration had increased and the pulse had increased to 128. After this the condition remained much the same.

In conclusion, the author compares the progress made by 100 patients otherwise treated, to the seven above reported cases. Of the 100 cases, nine died, seventeen lost weight, seven remained stationary, and the rest gained from one and one-half to twenty-three pounds. The physical signs, general condition, and expectoration, improved in the remaining cases. Of the seven cases, one died. The average gain in weight was seven and one-half pounds. Some improved in their general condition but the physical signs did not improve nor did the temperature or expectoration.

The therapeutic action was summarized as follows:

1. Urea given by the mouth in cases of chronic pulmonary tuberculosis increases the output of urea; but the total increase in this output was not as a rule equal to the total quantity administered.



2. Urea acts, only to a slight extent, as a diuretic; this action is variable and, on the whole, untrustworthy.
3. In both the output of urea and in the output of urine, the effect produced by the administration of urea is more marked at first, after a time the body seems to accustom itself to the intake of urea and tends to return to the normal output.
4. Urea does not act as a cardiac stimulant.

## OPHTHALMOLOGY

Edited by C. M. Culver, M. D.

### *A Simple Method of Examination of the Anterior Surface and Curvature of the Cornea.*

SYDNEY STEPHENSON. *Ophthalmic Review*, London, November, 1902.

If the front of an eye be examined by means of a small, concave mirror and a strong collecting lens, say convex 20 D., there is noticeable, as reflected from the cornea, a very bright image, of circular outline. It is the image of the edge of the mirror. Like all images formed by convex mirrors, it is erect, negative and smaller than the luminous object of which it forms the reflection. It becomes progressively larger as one approaches the cornea. If the mirror's plane be parallel with the plane through the limbus and the image be from the center of a normal cornea, it is, practically, perfectly circular. If the reflection be obtained from the periphery of the cornea, the image will be an oval, whose major axis is horizontal, if the transverse meridian of the cornea is approached, and vertical if it be from the vertical meridian of the cornea. No clear reflection can be gotten from the ocular conjunctiva, beyond the corneal margin, as the conjunctiva is not a good reflecting surface.

The image from the cornea includes (a) a smaller, circular spot, which represents the central perforation in the mirror; and (b) a small, upright image of the flame or other source of illumination. The latter shifts its position, within the mirror reflex, in a direction opposite to that of any movement of the mirror.

The author has found examination of this mirror reflex serviceable in two conditions, disturbance of the anterior, corneal epithelium and departures from the normal curvature of the cornea. The first is well exemplified in cases of stippling of the anterior epithelium in commencing, interstitial keratitis, where the ring-reflex is broken up and distorted over the affected part of the cornea though normal elsewhere. The appearance is similar when the epithelium has been lost, after injury to the eye.

When the normal curvature of the cornea is disturbed, the reflex is variously distorted, according to the kind of disturbance. This is evident in cases of regular astigmatism of high degree but is more pronounced in changes of curvature due to adherent leucomata or conicity of the cornea.

Hence examination of the mirror reflex is a convenient clinical substitute for a so-called keratometer, as Placido's disc. It is specially convenient because any surgeon who has a refracting ophthalmoscope possesses also a fair substitute for a formal keratometer.

*Clinical and Bacteriological Investigations concerning Marginal, Corneal Ulcers.* (Klinische und bakteriologische Untersuchungen ueber die Randgeschwure der Hornhaut).

ZUR NEDDEN. *Von Graefe's Archiv fuer Ophthalmologie*, LIV. Band., Heft 1.

This article, covering forty-six royal octavo pages, is an account of work on this subject that has occupied the writer's special attention for a year. Marginal, corneal ulcers are divided into two groups: first, those secondary to phlyctenular conjunctivitis and blenorrhœa of the conjunctiva; second, primary ulcers, not consequent or dependent on conjunctival inflammation.

The second group is subdivided into:

(a) Such as originate without apparent cause; among these being Schmidt-Rimpler's chronic, peripheral "furrow" keratitis and possibly Fuchs' variety, associated with uric acid diathesis.

(b) Those due to corneal infection by the bacillus which the writer has isolated and describes in this paper. This category (b) is again subdivided into two kinds of cases, one characterized by the occurrence of an isolated, oval, sickle or horse-shoe-shaped, or ring ulcer; the other by the occurrence of multiple, usually round, small spots of infiltration, followed by partial ulceration and secondary, severe implication of the conjunctiva. There occur, naturally, transition forms and deviations from the typical ulcers described. Such primary infections are purulent and hypopyon may develop from them. The bacillus which Zur Nedden has isolated is straight or slightly curved, is nine micromillimeters long and two-thirds as broad. It has rounded ends, takes ordinary stains but not Gram's. Two of them may be in juxtaposition, end on, like diplobacilli. Its cultural relations and differential diagnosis are discussed in detail. The thirty-three cases studied are tabulated and the clinical features and bacteriological results in each case are clearly shown. A few staphylococci and the xerosis bacillus were sometimes present, as well as the new bacillus.

The bacillus has not been found by the author in other cases, like conjunctivitis or lachrymal sac trouble, but only in marginal, corneal ulcers of the kind described. He thinks it an etiological factor in such cases; which belief is supported by the fact that, when inoculated into the cornea of a rabbit it produces an inflammation whose intensity depends on the amount and virulence of the culture used.

## LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY

Edited by C. F. Theisen, M. D.

*A Case of Foreign Body in the Bronchus.*

HOPKINS. *Laryngoscope*, December, 1902.

The patient, a girl, aged fifteen years, while skating and carrying a toy called a squawker between the lips, had drawn it through the larynx. This toy consists of a wooden tube two inches long tapering somewhat, and its greatest diameter is seven-sixteenths of an inch. To the smaller end is attached a bag of thin rubber, which is inflated by blowing through the tube. The dimensions of the collapsed bag of this toy are, length,

thirteen-eighth inches, width eleven-eighth inches, with an average thickness of about three-eighths of an inch, the whole forming a body of considerable size. The extra deep breathing caused by the violent exercise and laughing caused the toy to shoot through the patient's larynx into the trachea, rubber end first. Dyspnea at once became most urgent and the patient was taken to the office of another physician in Springfield, where she was seen by the author. When seen there, she was suffering from spasms of alarming dyspnea followed by short intervals of fairly easy breathing. On examining the larynx, no foreign body could be seen but the mucous membrane of the trachea was of a peculiar color, evidently stained by the coloring matter of the wood part of the toy. The movement of the right side of the chest was much restricted. The author considered it quite possible that the spasms of dyspnea were due to the position of the toy in the right bronchus. It lay with the open end up, so that air entering in inspiration distended the bag, thus for the time completely closing the bronchus. The girl was taken to the hospital and tracheotomy performed. The difficulty in respiration was much increased on lying down, so the patient had to take the anæsthetic almost in the sitting position. When placed upon the table with the head lowered for operation respiration ceased entirely. Artificial respiration was resorted to after tracheotomy was performed, and for a time the only sign of life was a feeble pulse. A long pair of forceps was carried down, into the right bronchus, a lip of the open end of the tube could be seized and the toy was withdrawn. The patient's recovery was uneventful.

The author in conclusion speaks of the possibility of direct examination of the bronchus, quoting from Coolidge's paper and from cases reported by Killian and Schrötter.

In Coolidge's case a hard rubber tracheal tube had become detached from its shield and dropped into the right bronchus. The tracheal opening was enlarged downward, a urethroscope introduced and pushed down to near the bifurcation. By the aid of reflected sunlight the foreign body could be seen in the bronchus. It was removed by a long pair of alligator forceps passed through the urethroscope. In Killian and Schrötter's cases, foreign bodies that had lodged in the right bronchus, were in each case removed through the natural passages. All these patients made perfect recoveries.

## MATERIA MEDICA AND THERAPEUTICS

Edited by Spencer L. Dawes, M. D.

### *Ergot in Chorea.*

EUSTACE SMITH. *British Medical Journal*, July 18, 1903.

Smith gives great praise to ergot of rye as a therapeutic agent in chorea, but declines to venture an opinion as to whether it exerts a direct sedative action upon nerve tissue or controls it indirectly by its influence upon the blood supply of the spinal cord. He scouts the idea that the ergot may have an evil influence, saying that he has never seen any of the symptoms described under the head of "ergotism," and calls attention to the statement of Trousseau, that "unless rye bread contains ergot in enormous proportions its consumption is not followed by evil effects, even when it

forms the main food of a people for years together." He (Smith) states that when given in medicinal doses it seems to be quite harmless, having given the fluid extract in doses of one fluid dram every three or four hours for many weeks together to children of seven or eight years, and in doses of twenty drops or more for many months on a stretch. In the majority of cases the beneficial effects of the drug have been quite decided. While taking ergot the pulse falls in frequency—perhaps as much as fifteen or twenty beats—but he has not noticed dilatation of the pupils or heard of headache or nausea or abnormal pain. While ergot is of use in other varieties of nerve disorder, it is in chorea that its value is shown more plainly. It acts more quickly than arsenic, never disagrees and is successful when arsenic has been tried in vain. One dram of the fluid extract diluted is given every hour to children of all ages, and complete rest in bed is enforced. Without this latter measure no drug is of much avail. Before commencing the use of ergot, make sure that the emunctory organs are in good working order. In many cases a drop of liquor strychninæ (Ph. B.) (about 1-90 Gr.), added to each dose does much to increase the efficiency of the ergot.

A case is described in which a child of six entered the hospital on November 13th, being in constant movement when awake. Treatment commenced at once and continued for eight days; one dram of ergot every two hours, without improvement. Trional, five grains, t. i. d., was substituted for the ergot and still no improvement. An examination showed a marked congestion of the liver which was treated with calomel and a saline followed by a bitter tonic for three days, and then the hepatic congestion having subsided, the ergot and strychnia were resumed and on December 7th, nine days later, the patient was discharged, cured.

Boys, he believes, require larger doses than girls. In one case, to a boy of eight, who had so little control over his muscles that he was unable to feed himself, he gave one dram of ergot with three drops of the strychnine solution every two hours for seventeen days and then every three hours for a week longer without benefit; the ergot was then increased to a dram and a half every three hours, improvement beginning at once. This dose was continued for eight days when the patient was discharged, cured.

He has given a dram and a half every two hours during the day and at frequent intervals during the night without exciting any untoward symptoms, and has continued until improvement was seen. It is to be noticed, always, when ergot is pushed until it produces beneficial effects, complete recovery follows quickly upon the first signs of amendment. The remedy ought not to be left off directly normal control over the muscles has been restored, but should be continued as long as any abruptness of voluntary movement remains.

*On the Use of Opium in the Carditis of Children.*

MORRISON. *Edinburgh Medical Journal*, August, 1903.

In a long and most interesting article, entitled as above, Morrison, after first going into the pathology, symptoms and causation of the various cardiac inflammations of children, says: "In the treatment of carditis, to the minds of most physicians of to-day, two main facts have become apparent:



(1) The uselessness of adding fuel to the fire by irritation or counter-irritation; and (2) the desirability of allaying, by all means at our command, local and general irritation and unrest." He cites Sturges and Stokes to show that digitalis, strychnia and other so-called heart tonics and stimulants, are "worse than useless." He concludes that we have in opium and its derivatives a drug of surpassing value for the treatment of these cardiac inflammations, especially when we combine the opium with strychnia and digitalis. He believes that these cases are largely influenced by nervous conditions and require a calmative agent, for which nothing is better than opium. He uses opium by the mouth and morphia hypodermatically, reducing the dose and the frequency of administration as the pulse slows and its increasing strength indicates an improvement in the heart's action. Cheadle, Gibson and Ashby are quoted as supporting his contentions. He goes on to describe a case of pericarditis, occurring in his own practice, which he treated mainly with opium, but which, unfortunately is not as convincing as it might be as the patient did not survive. The article is well worth reading, however, and it is quite probable that in selected cases opium may prove of much value.

### SELECTED FORMULÆ

#### PHTHISIS

When the cough is excessive with scanty, tenacious secretion.

℞ Terebene ..... fl3ij  
Spts. chloroformi. .... fl3iv  
Acidum hydrocyan. dil. .... Mxxx  
Syr. acaciæ, q. s. a. .... fl3iij

M. S.—A teaspoonful in water every two to four hours. Shake well.

#### ANÆMIA IN CHILDREN

℞ Ferri carbonatis sacch. .... gr. ss  
Hydrargyri chlor. mitis. .... gr. i-10  
Sacchari lactis. .... gr. ij

M. S.—For one tablet. Give in a teaspoonful of milk three times daily.

—Koplik.

#### NERVOUS DYSPÉPSIA

℞ Ammonii bromidi,  
Sodii bromidi, aa. .... gr. xv  
M. ft. chart. No. xx.

S.—One twice daily in milk.

—Einhorn.

#### ANÆMIA

℞ Ammonii chloridi. .... fl3ij  
Tinct. ferri chloridi. .... fl3iv  
Glycerini ..... fl3j  
Aquæ, q. s. a. .... fl3iij

M. S.—A teaspoonful, t. i. d.

—Katzenbach.

#### GASTRIC NEURASTHENIA

℞ Ferri bromidi  
Quininæ hydrobromatis, aa. .... fl3iv  
Extr. et. pul. rad. rhei. .... q. s.  
M. et. ft. pil. No. cxx.

S.—Two, t. i. d.

—Maximowitsch.

#### ENURESIS

℞ Extr. jaborandi fld.,  
Extr. belladonnæ fld., aa. .... fl3j  
Extr. tritici repentis fld. .... fl3ss  
Extr. ergotæ fld.,  
Extr. rhois aromaticæ, aa. .... fl3j  
Aquæ ..... fl3ss

M. S.—Fl3j thrice daily.

—S. W. Armitage.

# ALBANY MEDICAL ANNALS

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## Original Communications

### THE MANAGEMENT OF EPIDEMICS OF CONTAGIOUS AND INFECTIOUS DISEASES.

*Read at the Third Annual Conference of Health Officers, held at Albany, October 8 and 9, 1903.*

By J. S. FULTON, M. D.,

Secretary of the State Board of Health of Maryland, Baltimore, Md

If I should interpret my title literally, and attempt to treat the subject in detail, we should all be overcome with weariness before I could impart to you any fresh interest or new ideas. I shall say very little about the dynamics of the subject, but as much as the occasion will permit about its ethics. I shall not undervalue the large powers with which you are legally invested; these are indeed indispensable, but, even so, they are no more than tools, and answerable only to the purposes of clear brains and practiced hands.

To possess good implements with a knowledge of their use is not a complete preparation for your work; it is the most important point of skill to keep one's materials in good condition. Your material is the American public, a self-governing people, obedient enough to common sense and reason tactfully applied, but refractory as flint to coercion. I hope to keep this side of the matter most prominently in view while speaking to you to-night.

If I must address myself, as I suppose I ought, to those phases of local sanitary administration which are most perplexing, I think they are to be found in the jurisdictions administered without expert aid by one man. The health officer who looks after a large compact population has usually sev-

eral assistants, and if his office is well managed its operations excite in ordinary times no more popular interest than do those of the police or fire department. Sanitary districts of less population density on the other hand are usually administered by one medical officer, who has no assistant and devotes most of his time to the practice of medicine.

A health officer is handicapped from the start if for any reason his official character is seen in public only occasionally. If the health officer cannot put aside his private professional occupation and character for the period of his incumbency, I think he ought to appear in both characters every day. A small community is about as panicky as the inhabitants of the brier patch, and the unfamiliar activities of a health board in the presence of epidemic disease often augment instead of quieting popular fear. Indeed I have sometimes seen these semi-occasional health officers themselves in a state of noticeable excitement during emergencies, although in private practice they were cool and resourceful men. On all accounts it is very important for both health officers and the public to be habituated to routine sanitary operations such as even the smallest districts require.

It is possible for a sanitary officer to be too active, although I believe it is rather unusual. The American people professes little respect for authority, and delights to take a fall out of a bumptious official, but they easily acquire confidence in steady-going, cool headed leaders, and give such officials loyal support and obedience.

There are unobtrusive means of keeping informed about the health affairs of a community and simple methods of handling most emergencies. The safety of the public does not require, and common sense certainly forbids the exercise of energy disproportionate to the peril involved. As a rule the people expect familiar diseases to be handled with far too little attention to details, and in the presence of unfamiliar infections they often demand excessively rigorous measures. For instance, I have known people to demand that the windows of houses where small-pox was present should be kept constantly closed and that the healthy inmates should be forbidden to take exercise in the yard. Once or twice in my experience local health officers have imposed such useless and even harmful regulations.

Preventive measures should never include any step that ignores the welfare of the patient or the household. The operations should indeed be helpful to the infected household. I consider the common infectious diseases the material ready to the hand of every health officer for the routine training of the public into a recognition of the private as well as of the public value of preventive medicine, and the infected family should in every instance realize most fully the helpfulness of the local sanitary administration. The radius of influence of a single case or household is always short. Healthy people do not care much about the means of preventing disease unless a focus of infection is near at hand, and their interest in the subject disappears when the danger has passed. You must therefore bring your influence to bear upon the right spot at exactly the right time.

#### OFFICIAL RECORDS

From the beginning of his official life the health officer should make written notes of his daily work. The laws upon the subject often require written reports to be made at stated intervals, but it is the general rule that these reports are written at the end of the period, and from memory or from very scanty records. It is a common complaint in this country that health officers are poorly paid. So they are and so they will always be so long as, on the one hand, the public believe that health officers are not regular public servants but emergency officers, and on the other hand, the officials try to keep their activities down to a dollar's worth for each dollar received. The majority of officers in small communities cannot show by the records at the end of a year that they have earned their salaries, although their work may have been exceedingly profitable to the community. Indeed the peculiar quality of a health officer's work is that if it were perfectly successful its success could not be demonstrated at all by such evidence as appeals to the popular mind. Therefore of all men in public employ, public health officers need most to keep a diary. Every single day should have its record. I doubt if any fiscal body however penurious could withstand the argument of a carefully kept record.

In the presence of an epidemic an American public is apt to be censorious, and in such circumstances the officer who has



made systematic records has the best possible defense. It was recently my duty to ask a local board of health to remove their executive officer. Two sorts of incompetence were alleged. One was that he had allowed an outbreak of smallpox to progress without making notes of the dates or of the names or the number of patients, or of the number or results of his vaccinations, or of the names or number of his contacts and was therefore unable to give a reliable account of his operations. He only had in all fourteen cases of smallpox, but the State Board of Health believed nevertheless that these were twelve more than he should have had and that his outbreak lasted three times as long as was necessary. It is perfectly obvious that a man of that sort can not be prepared against surprise, and, as I said before, cannot make a convincing defense when he is criticised.

You must never leave the central authority unadvised of your operations. You should not only report at the legally prescribed intervals, but should send immediate reports of unusual occurrences. Your official news must outstrip the service of the daily press. Nothing can so inspire people at a distance with respect for your local administration, and nothing can so protect your town against undesirable notoriety as the ability of the Health Commissioner of the State to speak by the book for your community. Hardly anything I venture to say irritates your health commissioner more than to receive from a newspaper reporter the news which he should have had first from a local health officer. The commissioner wants to be able to say to the man after a scare head "There can hardly be anything in your story, for Dr. — keeps us constantly informed," or else "There is not much of a story. Here are all the facts from the official sources up to last night."

The procedures against the spread of infectious diseases may be classified under several heads as follows: Notification, inspection, immunization, isolation, quarantine, parole, disinfection. Time will permit me to give but little more than mention to some of these subjects. We will take them in their logical order, beginning with

#### NOTIFICATION.

It is quite as important to avoid surprise as to prevent an epidemic for the former often includes the latter. One must

therefore utilize day by day every legitimate source of information. The notification law must be in operation all the time. These laws are designed for ordinary use rather than for extraordinary use. If so far as the familiar infections are concerned the notification law is allowed to fall into disuse, then when you most need the aid of its operation it will not work. When after a long period of disuse a health officer is obliged to enforce the notification law he is in an extremity about as bad as an epidemic. Under such circumstances the health officer often confronts both these difficulties at once.

If the notification law is kept operative at all times the popular mind appreciates its necessity and its reasonableness. If, however, the law is dragged out of oblivion to serve in an emergency, great difficulties will be found in exacting a penalty for non-observance. Courts will not, as a rule, punish a man for infringing a law which has long been winked at, perhaps forgotten. If it can be shown that the law was knowingly violated and that the consequences which the law seeks to provide against followed the violation, in other words if a fully informed practitioner can be shown to have defied the law and to have involved the public in great danger thereby, you may secure a conviction if in addition to so much proof you can bring your case to trial while the public danger is fresh in the popular memory.

In Maryland we have a little plan of keeping physicians constantly in mind of the notification laws. Every man who sends a specimen for diagnosis to the state laboratory finds at the very beginning of his application blank this question, "Are you up to date in reporting births and infectious diseases?" If he overlooks this question he gets from the laboratory, instead of a report on his specimen, a note requesting him to complete his blank by answering this question. We have wounded the dignity of but two physicians in our rather large experience with this little requirement.

It is extremely difficult to enforce the notification laws upon an unaccustomed profession or public, but it is easy enough to operate such a law if the profession and the public have once learned that it leads to no unreasonable or burdensome intervention.

Private practitioners and private citizens are naturally suspicious that if a case of measles is reported to the health

officer that official will immediately proceed to turn things upside down. I have seen people who expected and feared such a display of pernicious activity, disappointed and even disgusted because it did not occur. I have observed also that physicians who protested that the notification of measles was an unjust requirement because the presence of the disease did not justify any official intervention, afterwards criticise the health officer most severely because when cases of measles were reported he did not intervene.

The control of an epidemic disease lies in the management of the earliest recognized case. Unfortunately the earliest case is often not recognized, and this is about the commonest excuse that health officers have to offer for the occurrence of epidemics. The responsibility is referred back to one's fellow physician in private practice, who in turn is apt to resent the imputation and to make reprisals. Now it is perfectly just that the primary responsibility of correct diagnosis should rest upon the private practitioner, but there is a right way of placing it there.

It is an honored rule in the army and navy that matters of strategy and tactics must not be discussed with civilians, and a similar scrupulousness should be practiced by public health officials. Keep family differences inside the family. It will pay far better to accept all the criticism that the half-informed or misinformed public lay upon you than to speak to any layman about a practitioner's error of diagnosis. You need before all things the support of the profession, and you can have it by supporting the profession. Physicians are, as you may have observed, sensitive creatures, and the way out of a delicate situation must be made easy for them. They seldom persist in an error from mere obstinacy: the consequences are too expensive. Once in a while an open issue must be made, but that is very rare, and can occur only with a stupid or ignorant medical man, or one who has been forced into an unpleasant attitude by some one else's indiscretion. It not infrequently happens that the mistake which lighted up an epidemic has been too long past to be reviewed by any one except the man who made it. In such a case it is best to say nothing about the origin of the outbreak however strong the probabilities may appear.

Under the head of notification the question of placarding

should be mentioned. I am not convinced that the results of placarding are anything like so good as the advocates of the practice would have us believe. I believe that the scare placards which are so often used do more harm than good. If it is necessary to inform every passer-by that there is infection in a certain house it can be done without emblazing the landscape. An inconspicuous card in the right place will give ample warning. It would probably suffice to convey the information by means of a bulletin board at either end of the block, using one catchword in type large enough to be read without stopping, and printing the addresses in smaller type. In most places the laws require placarding and I do not wish to be understood as disapproving the practice. I only say that its benefits are not clearly proven, while its disadvantages are well known.

#### INSPECTION

The distribution of circulars such as the State Health Department provides is, I am sure, an effective means of enlightening the public mind. The wholesale papering of a community with such leaflets is not profitable, but in the infected houses and their immediate vicinity they do a great deal of good.

Inspection is in most places the routine step next in order after the presence of an infectious disease is reported, and useless inspections are still in vogue in some very enlightened cities. There are certain popular delusions about the infectious diseases, which health officers ought to set their faces against, but which are rather kept alive, I fear, by health officers. For instance, it is the time-honored but absurd custom in many places to inspect the back-yard and the house plumbing whenever a case of infectious disease is reported. An outbreak of scarlet fever or diphtheria or of any other disease of this latitude, typhoid fever and malaria excepted, has no relation whatever with the condition of the back-yard or of the plumbing. There are good reasons for police inspection of back-yards, but the existence of infectious disease is not a decent pretext for such an inspection. I have known weeds cut, ditches put in order, and cats killed in order to stop the spread of infections, but I have never known these things to do any good. The decencies ought to be preserved at all times for



reasons quite part from public hygiene, but to fight infection by mere guess-work and superstition in these days does positive harm by diverting the public mind from the rational and effective means of prevention which modern science has supplied us, and by keeping alive false beliefs which should have been long since dead.

Inspection is not always in order upon the notification of an infectious disease. I am inclined to think that in cases where the more stringent sorts of isolation are not necessary, inspection is also unnecessary. Taking the common infections of childhood for example, the safety of the family can generally be left in the hands of the attending physician without any personal supervision on the part of the health officer, and outside the household a good defense of the schools will about complete the necessary precautions.

In the presence of diphtheria every throat in the household ought to be inspected and cultured. This is an absolutely indispensable step, and unless the attending physician can and will do this promptly, it should be done by the health officer. Outbreaks of diphtheria often raise an important question about the management of public schools. If the number of cases is considerable some one will be sure to suggest that the schools should be closed. It has often struck me as curious that health officers will sometimes treat an infected school in a way precisely opposite to their way of dealing with an infected family. To send all the pupils their various ways without heed or caution seems to me a very ill devised method of controlling the spread of diphtheria. The hygiene of diphtheria is absolutely specific. Its presence can be recognized before symptoms appear, and its progress can be stopped almost peremptorily. When an outbreak definitely involves a particular school, the assembled pupils in the school room offer the ideal opportunity for the health officer to become accurately informed as to the amount and location of the threatening infection. Every throat in that school should be inspected and cultured. Children from infected houses being excluded, and children with reddened fauces sent home, the school can continue work with no more danger than the children would probably encounter at home or on the street. In twenty-four hours after the specimens have reached Dr. Pease's laboratory, the health officer should be in possession

of all the information which for the time being he needs, and if he has antitoxin enough, he may cut the outbreak off exactly at that point.

House inspection is always necessary when one intends to confer a specific immunity upon susceptible persons, or when one must impose serious restrictions upon personal liberty, and rarely it is necessary to make house-to-house inspections for medical observation of contacts, or for the discovery of concealed cases or those not under medical care.

### IMMUNIZATION

Immunization is a preventive measure about which we shall hear more and more in the future. At present it is available against but two diseases. Under the name of vaccination, immunization has a century long history during which small-pox has declined from a mortal terror in the eyes of our forefathers to a mere tradition of ancient fear, a thing scorned by the heedless of our own day. The medical profession itself has grown ignorant of the disease, and even the features of vaccinia, familiar to those of but a generation ago, are most imperfectly known by the medical men of the present. Having no means of realizing the horrors of that plague from which we are delivered, it is not strange that to the lay mind of to-day the truth about smallpox and vaccination should seem but a dying superstition.

Immunization on a large scale against typhoid fever, cholera, plague, and tuberculosis may be among the gifts of medical science to the preventive medicine of the next quarter century. But we have now, full grown and ready for active service, an immunity which bids fair to rival vaccination. About fifty years ago diphtheria became so large a factor in the mortality of this country that wise men believed that it must become the most remorseless agent of untimely death. In various parts of Europe it had acquired a variety of popular names expressive of its frightful energy. Since 1893 all this has changed. Practitioners of no longer service than my own have ineffaceable impressions of the disease as it appeared before antitoxin was given us. The young practitioner of to-day cannot possibly become acquainted with the diphtheria as we knew it twenty years ago and earlier. Even in special hospitals for its treatment he can scarcely glimpse its worst

features. What youngster has seen a family wiped out as I have? We do not find, however, that antitoxin has been as freely used in public health work as it should be. Its free use offers by far the speediest, most effective, and most economical method of terminating a diphtheria outbreak. In many places it is supplied at public cost for the cure of cases, but not for immunization. To my mind this sort of discrimination is gross extravagance. Antitoxin promptly and freely used makes epidemic diphtheria impossible.

#### ISOLATION

Isolation is generally held to mean the separation of the sick from the susceptible. Practical isolation has many grades of severity. A case of malaria is perfectly isolated when surrounded by a mosquito barrier. Smallpox in the other extreme requires the most rigorous isolation, that is removal from the home to a special hospital. One often hears the question whether it is in the power of a board of health to remove cases of smallpox to a special hospital. I do not know what you can do in New York, but in Maryland whenever it has been tried it has been entirely successful. The prime essentials to success appears to me to lie not in the strength of the law, but in the fitness of the hospital, and the tact of the officials. Moreover, I am fully convinced that hospital isolation of smallpox is much the cheapest and most satisfactory way of handling outbreaks of smallpox. I have observed too that unprepared communities which on the occurrence of one or two cases of smallpox made expensive preparations for the segregation of all cases, did not grumble when their outbreaks were cut very short. On the contrary, they were often quite proud of their promptness. Other places gave them ready standards for comparison, and business men were particularly gratified that the least possible disturbance of their affairs had resulted.

#### DISINFECTION

Immediately after the removal of a patient to hospital or after recovery or death, if treated at home, the house is ready for disinfection. I shall pause only long enough on disinfection to say that the health officer should make careful observations upon the radius of influence of every case. The striking

distance of infection in a laundry, for instance, is much longer than that of the same infection in the home of a professional man.

Disinfection should be done by an approved method and should be checked in every instance by laboratory tests of efficiency. Disinfection should be done by careful persons and if possible by expert persons. This is not always the rule even in large towns.

There is a word commonly used in this connection which I should like to see abandoned. It is fumigation. The employment of this word keeps alive the misplaced confidence of the public in a good many substances which have more effect upon the respiratory tract of the casual observer than upon the specific organisms which ought to be destroyed.

#### PAROLE

The treatment of exposed persons includes sometimes, perhaps oftener than is wise, their strict isolation. Taking smallpox as an example, the common practice of keeping smallpox contacts away from their employment and secluded from the public for twenty days seems to me unnecessary. Whenever you are dealing with a class of people whose material interests are substantial enough to keep them within the district, you can handle contacts quite safely by means of parole. Let us suppose that smallpox has been discovered in a boarding house or in a factory. After the removal of the case, the disinfection of premises and clothing, and the vaccination and revaccination of all exposed persons, it is perfectly safe to allow every contact to attend regularly to daily work, and to go about at perfect liberty, provided that each person will engage to report daily at a stated time and place for medical inspection, and that in case of failure parole shall be forfeited and isolation substituted with the aid, if necessary, of the police. Practically all classes of persons above vagrancy can be handled upon this plan. When persons are kept under observation, whether on parole or not, every individual should be accounted for every day, and the memoranda should be written. When one employs parole in a small community for the first time in handling smallpox, the plan is likely to receive some popular criticism. But if you make your daily observations scrupulously, you will get besides the main thing, the control of the disease, three other de-



sirable results; first, the persons under observation will respect the reasonable restrictions upon their liberty; second, the general public will gain confidence by a near view of your orderly methods; and last, you will have made a complete history of your outbreak while it was in progress.

I have said nothing about quarantine. The useful features of quarantine are properly included under isolation, and what remains of quarantine after that is not worth saving. Within the bounds of this country quarantine is of no use except as a means of punishing negligent or defaulting communities. The sort of quarantine which is occasionally resorted to in the yellow fever belt of this country, and such as smallpox sometimes brings into play in the north, is not only worthless as a preventive measure, but is also a disgraceful commentary upon the knowledge and practice of public hygiene in whatever locality it appears.

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## THE EDUCATION OF THE NURSE.

*Address to the Graduates of the Albany Hospital Training School for Nurses, May 16, 1903.*

By WILLIS E. FORD, M.D.,

Utica, N. Y.

I presume the idealist aims by all education to perfect character, to develop a man's best instincts into permanent habits, and to eradicate bad impulses, thus fitting the individual for usefulness, and therefore happiness, and enabling him to fulfill the destiny for which he was created. The utilitarian idea is that education is to enable the individual to secure wealth, or power, or happiness, by a quicker, easier and more certain method than he could without education. The motives that prompt the average person to secure education are probably mixtures or combinations of these two.

It naturally follows that the kind of education one aims for depends upon his notions of what a desirable life would be. While all human experience must be considered factors in an education, it is perhaps easier to talk about it if we consider only the chief or technical element, instruction. Whether the instruction is reluctantly received by the dull youth, or ardently sought for by the ambitious student; whether from books or lectures or intelligent observation, an education of some sort may

be obtained. Fortunately for us the present policy of government and of society is to make it comparatively easy for all who desire it, to obtain a fair amount of education. It is the kind of education which is now the most important question to decide.

When profound observers of history state, that almost every reform which has marked the evolution of the race, has been opposed by the educated classes, we wonder whether the kind of education of the past ages has been the right kind. The destruction of feudalism and of human slavery, the extension of the franchise, the guaranteeing of personal rights and universal education, have all at the time been bitterly opposed by the educated classes, and forced forward by the middle and lower classes. In later days the formation of labor unions, the extension of the common school system, and regulation of harmful monopolies, have been opposed by the educated classes; but the results secured have now come to be recognized as beneficial by all unbiased observers, and as necessary and inevitable steps forward in the evolution of society.

Of course, it is no longer true that aristocracy and wealth are the chief factors that make education possible, as was the case in older civilization; and so in the future the prejudiced and narrow view of life which has opposed the progress of the race, will, probably, be less potent in the future. We must modify the views of education which were held by educated men of even fifty years ago. Intellect alone has not proved to be the most potent energy in the evolution of the race. Education alone does not fit men for the great work of the world; and yet in the middle of the last century this was pretty generally taught by the ablest thinkers. Practical results are so often worked out, and great enterprises are so often carried on by men whose educational advantages have been most limited; while there are so many examples of educated men who are useless and who have no positive influence in the affairs of life, that we wonder again if the kind of education we have been applauding lately is altogether right.

I take it that no sane man will maintain that education is not desirable. The sole question is to secure the kind of education that is best adapted to our capacity and needs. In a general way and in this country the tendency now seems to be to devote much attention to the education of the body as well as the mind, thus aiming to secure a more practical result, and a useful life rather than ornamental result.

There are many facts that point to the correctness of the theory that precision in the use of tools and instruments develops the mind and makes more accurate thinkers. Hence, manual training is a part of the scheme of the public schools. One cannot habitually use the thermometer, the balance, and the graduate, with accuracy, without learning to think and to reason with something like mathematical correctness. The best logic is not only clear, but has in it an element of mathematical exactness. As soon as we get the fact thoroughly soaked into our minds that two and two make four, and never under any circumstances make five or six, we cease to speculate carelessly and to guess at results. Accuracy of observation and of statement must be reckoned as essential elements of education.

Just how far along the same route the boy and the girl should proceed together in their search for higher education, is yet an undetermined question. It would seem that in this country, perhaps more than in others, there has grown up the impression that the mental qualities of the sexes are alike providing their training is alike; and that their ability to do any work is the same, barring the difference in physical strength. I think this will not be conceded by those who are best qualified to judge in these matters, and who, it seems to me, are willing to concede to women all that is their due.

Ultimately there must be a divergence of paths, the young woman following one route and the young man another. This would be necessary even if the pursuit was for the same goal. As a matter of fact, the goal is not the same and cannot be in the nature of things; hence, the education of women must differ very materially from that of men.

One criticism, which, it seems to me, has been very justly made concerning the trend of the education of the women in America, is that it tends to draw away from the idea of home-making and home-keeping. (Munsterberg.)

Without going into the question as to whether home-making and the domestic life is the ideal towards which all education of women should tend, it is a fact that a large majority of women are engaged more or less directly all their lives in domestic occupation. I think it can be fairly said that this was the lot intended by nature for her to fulfill, without in any way disparaging the mental attainments of women. It is pointed out by this same authority that in Germany the tendency of the education of girls

and women is toward one point, domestic activity; and that everything is avoided which should tend to impress upon the minds of girls and women the idea that domestic occupation is drudgery, or beneath her, or unworthy of her highest ambitions.

Those who have had large experience in professions or occupations, where women are employed or work, cannot fail to realize that a great number of girls and young women who enter occupations, do so because of their dislike for the home life. It is true that with the great middle class, which is the bone and sinew as well as the brawn and the brain of our present civilization, the desire on the part of young women to do something for wages which will render them temporarily independent and enable them to avoid (what they do not conceal, that they look down upon) domestic occupations, is crowding out of many occupations the men who otherwise could become home-makers and supporters of families. Wages are cheapened because the young woman lives at home and because she does not look forward to laying up a sum of money adequate to start and maintain a home. This great attraction away\* from the home and toward what is looked upon as an independent life, is one of the strange phases of our American civilization at present.

But this does not influence the wage earner alone. The same tendency in education brings about the same repugnance to domestic life in the minds of those women who are not dependent upon their labor for their support. This, it seems to me, is quite as serious a phase of the question as this which relates solely to the wage-earner.

The agitation of the question of woman's rights, or their entry into the various occupations and professions, allures many away from what will necessarily be their ultimate destiny; and instead of fitting them for the sphere that they must occupy, they are made discontented with the inevitable order of things. What will ultimately become of that vast army of attractive, intelligent and capable wage-earners, who now live so independently and who treat the future so flippantly, and regard the sterner sex with so much contempt because of their position of independence, when a few years shall have robbed them of their attractive personal appearance and made them weary of the lives they are leading, and whose education has made them rather repulsive than attractive to men, is, I think, one of the most serious social problems of this age. This experiment has not been tried for a



long enough term of years for us to see as yet what the results will be, for the revulsion against domestic life or the tendency to look upon household work as drudgery, and, therefore, under all circumstances to be avoided, is but a modern thing.

No woman can live her life out in an office as can a man, nor in the shop, nor in the store, nor in the factory. She ages sooner than man and when infirmities have come she is unable to turn her attention to anything else.

This criticism of the tendency of the education of the American woman, that unfits her for her natural sphere in life rather than to make her accomplished, contented, and successful in the place in which she would be happiest in filling, would seem to have a great deal of truth in it. How much of domestic unhappiness, not to say bitterness, misery and sin, comes from this tendency of modern education, no one can say. An education which tends to produce any of these results cannot be called an ideal kind of education, and it loses its utilitarian aspect also if it prohibits the highest destiny of women. In fact, it may be truly said that the kind of education which leads away from the manifest destiny of the greatest number is wrong. The mental attitude of women toward their work is not the same as that of men. Generally speaking, there is not the same steadiness of purpose, nor the same respect for authority, excepting where the affections are concerned.

There are some masculine traits that differ from feminine traits even among half-educated people. For instance, a half-educated man is much more apt to have respect for learning, for law, or for authority, than the half-educated woman. This is clearly shown by the tendency of the half-educated woman to rush into all sorts of fads, and isms, and cults, which the man of equal learning avoids.

On the other hand, it has been said that idealism in education has been preserved in this country by the women rather than by the men; and that in any new community where the men have to labor with their hands to procure their sustenance, there is little time left for that culture which is necessary to keep alive the appreciation of high ideals. Up to a recent period there has not been in this country a sufficiently large leisure class devoted to the pursuit of an idealistic higher education, to bring this higher education to the same plane that it occupied in older civilization. There has been a manifest change in the trend of education and

ideas—especially as related to women—within the past twenty years, and one of the chief results is that an increasingly large number has sought occupation outside of the home. Among all these occupations for women there are but few in which the preliminary training or the fitting process does not lead away from the home life. I can now think of but two callings, namely, that of the teacher and that of the trained nurse, to which this criticism does not apply. The training of women, which enables them to become successful teachers, does not necessarily unfit them for domestic duties later in life. Indeed, much of this training enables them to more successfully manage their own house, and thus become home-keeper. I think it cannot be denied, however, that which fits a young woman for the profession of the trained nurse, is devoid of all of these objections which can be raised regarding the education of women for other occupations. This training which now continues over a period of three years, in the best schools embraces a course of study which may be of use to a woman in almost any position in life. Didactic lectures from which she may receive information that is useful not only in nursing but in home-making and in home-keeping, are given in addition to recitations. The manual training and use of instruments of precision tend to make orderliness, accuracy, and exactness of observation, all of which may be utilized with advantage in any station in life. This training also includes such a thorough teaching of house-keeping as ought to make one not superficial or inaccurate or clumsy, but is really a higher education in domestic economy, which would be profitable if it was possessed by all house-keepers of whatever station in life. It ought to teach such a wholesome respect for law, order and discipline, as well as a reverence for the great laws of nature, that it would enable them to conduct house-keeping with the least effort and with the smallest expenditure of strength. These habits of orderliness, of respect for law, of systematized work of any kind to be done, makes all duties easier to perform, and gives a larger amount of leisure for self-culture or for pleasure.

I want to quote here a paragraph from an address of a distinguished college president on an occasion similar to this:

“Forty years ago the advocates of female suffrage used to assure the world that with the granting of the ballot to women a great heightening of feminine character, ideals and dignity was sure to be effected. Women were to be fully emancipated, to

cease to be toys and puppets by the reality and objectivity of taking part in the government of the nations. The political sphere and privilege of women has been greatly enlarged, but no result of the character predicted has been obtained. Female suffrage has not come, but in various partial ways it has been sufficiently tried to make it certain that it would not produce a heightening of feminine conduct and ideals. It is my earnest and profound conviction that more will be done for the emancipation of women by the continual graduation of trained nurses into domestic and social life, than could ever be accomplished by any amount of political activity."

If the education of the nurse is to fit her for these higher responsibilities, both in her work and in the community in which she lives, it must be conducted in such a way that she loses no part of her femininity; that the attractiveness, modesty, and all the qualities which go to make up an agreeable personality must be carefully conserved. It is not at all an indication of strength of character for a woman to deport from the formalities of life, or to assume brusqueness or rudeness which is unattractive. The good that one can do often depends as much upon good manners, a cheerful spirit, and an attractive appearance, as upon the more solid and essential qualities of character, and it is because these bring the opportunity.

After all, we may say about success in life, the opportunity to show one's talent and to put in play the results of training, is the most difficult thing to secure in the beginning of any career. Those circumstances which make the opportunity for us are often the most fortuitous of all which contribute to a successful career. The best gift that any of us can receive is that of opportunity. If the recipient lacks the training, energy or sense to grasp the opportunity and to make the most of it, no other gifts will help him to any great extent, and even charitable aid is thrown away upon him.

The art of nursing is admitted to be a feminine art, hence it is certain that those qualities which women possess and men do not must be the strongest factors in giving success in the work. True womanliness and the absence of everything that is mannish, or unworthy, or ill-mannered, must be the elements of character most to be considered. Every feminine grace and charm of character and everything which tends to an attractive personality showing the woman to be one of character and refinement, ought to be as carefully cultivated by the student and as skilfully taught

by the superintendent, both by precept and example, as the mere technical training which enables a nurse to do her necessary work. Almost any sort of a good woman can be taught to do fair nursing so that she can do the duties in the sick room in an ordinary case with success. But the converse of this proposition is not equally true. It is not so easy to teach a nurse those qualities and accomplishments which make her cultivated as well as intelligent. I believe too little attention has been paid to the general culture of the nurse while in the course of training, and too little consideration of what constitutes an attractive and wholesome personality; while altogether too much time has been spent upon the unnecessary details of anatomy, chemistry and other technical studies.

The failures that I have observed among those who have been well-trained to do their work in the sick room, have generally been due to a want of tact and good sense in the ordinary matters which pertain to good house-keeping and proper personal conduct. It is very rare to have any complaint either from the physician or from the family, concerning the work of a nurse so far as the care of the patient is concerned after she has left the school. Of course, this goes back to the question of what the early training was, and what the opportunities have been for an education, and what the character of the pupil nurse is when she begins her work in the hospital. My superintendent says that the greatest difficulty lies not in the learning and reciting of lessons or in the comprehension of the work that is to be done in the operating room or in the ward; but rather in the difficulty of getting the pupil nurses to properly appreciate the house-keeping part of their work, and in getting them to be particular in their personal habits and manners. In the ultimate analysis it would seem to rest with the home-training and with the school system which has given them their point of view of life before they become pupil nurses. I can hardly illustrate my meaning in speaking of the peculiar training which nurses ought to have, without referring to other professions. There is probably nothing so odious and so repulsive as an unkept, vulgar, low-minded physician unless it be a slovenly appearing and ill-mannered priest. Such persons may be bright and competent to do certain things very well, but they will lose their influence upon the community, as well as a large part of their opportunity to come in contact with better people because of these personal qualities.



"The opportunity to do good and to uphold the honor of the profession and to properly present it to the world, and to make the professional work influential in other ways than in merely technical matters, depends so largely upon the personal appearance and attractive manners, and the possession of that tact and high-minded view of their work, which all professional persons should possess, that the mere technical knowledge is often secondary in consideration. If community itself is concerned, the trained nurse, therefore, is to have that influence in the community for good, which her training prepares her for in many ways, and if her example in the houses of people where young children are being trained for their life-work is such as to bring approval, she must have something more than mere technical skill in doing the things which are required by the sick."

If she is ambitious to occupy a better sphere, her training, if properly given and rightly appreciated, will prepare her better than the training of most other women. If this larger view of the duties and responsibilities of a nurse are appreciated during the period of training in the hospital, the quality of the work done will be much better, and the character as well as the skill of the nurse will be much more satisfactorily developed, even in the hospital.

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## OPERATIONS UPON THE STOMACH, WITH SPECIAL REFERENCE TO THE TOILET OF THE PERITONEUM

*Read at the Congress of Physicians and Surgeons, Washington, D. C.  
May 12, 13 and 14, 1903.*

By ALBERT VANDER VEER, M. D.,  
Albany, N. Y.

Professor of Surgery and Dean of the Faculty, Albany Medical College.

There is probably no portion of abdominal surgery in which a surgeon of my age has so much to be thankful for, and to feel grateful in regard to the work accomplished by our profession, as in the progress that has been made in the various now recognized operations upon the stomach. Of the success attending this line of work I feel I am asserting the truth when I state that it is largely due to the care that has been exercised, more especially of late, in the toilet of the peritoneum.

Operations upon the stomach are so varied and at the present time such a well-recognized procedure, becoming more and more so, not only by the general practitioner, but by the public at large, that while we have the serious factors that enter into this work, such as the exhaustion of the patient who has allowed the favorable opportunity to pass by, when emaciation is too apparent, when the nerve centres are so exhausted that the operation becomes very much more difficult; yet, withal, we must ever bear in mind the necessity of sufficient time being afforded, in doing the operation selected, to carry out carefully the technique of the peritoneum and help to avoid the dangers that may result from imperfect drainage later on.

The technique of the peritoneum begins even before the abdominal incision is made. I do not refer to the preparation of the patient, but more especially to the diagnosis that has previously been reached. In the correct diagnosis much depends upon the work to be done within the abdominal cavity and the handling of the contents. Traumatism of the peritoneum is to be avoided as much as possible. The length of the incision is of importance. If the lesion has been correctly diagnosed there is a vast difference in dealing with a simple ulcer, no adhesions, and one in which the chronic history indicates firm adhesions and many complications. In the former there is little exposure of peritoneal surfaces and a short incision is permissible; in the latter a long incision becomes necessary and much more erosion of this delicate membrane is called for. There is much in the method of examining the contents of the abdominal cavity when once the latter is opened into. I cannot believe that it is always wise to bring everything out for macroscopic examination, unless it is absolutely necessary. There is no gauze, no wet towel of any material, nor normal or artificial sponge but that will do some harm to the peritonenum. It may not be in the actual bruising or tearing of tissue. Handled ever so carefully, an element of shock is introduced that can sometimes be eliminated; therefore, when a reasonably certain diagnosis leads the surgeon to think that a short incision will answer, let him make use of it.

Again, on the other hand, if indications are such that a long incision is likely to become necessary, let no great amount of time be lost in making it. I am strongly impressed that we should fix in our minds methods of examining the pathological lesions that may be present; that is, the more expert we become in examining

conditions within the abdominal cavity—for instance, not lifting the stomach out through the incision if it can be avoided—the better. Each of us can probably call to mind the attitude of our anæsthetist, as follows: When working within the peritoneal cavity all has gone well, but as soon as we begin traction to deliver the mass he has quietly said, “the patient is not doing so well,” and if at any point posteriorly the peritoneum is torn, as sometimes occurs with the gentlest manipulations, the shock is more marked. I am constrained to say—when, for instance, we are attacking the stomach and feel somewhat in doubt as to our diagnosis, and at once realize that our examination is likely to be prolonged—that it is good surgery to block off the cavity, holding the intestines well away from the field of operation by means of gauze veils, and not have any more of peritoneal surfaces brought outside or exposed than is absolutely demanded. I do not think soiling the peritoneum with fresh blood or healthy bile is particularly dangerous, but the contents or secretions from other mucous surfaces should be carefully avoided. Feces, gastric secretions, pancreatic fluid, infected bile, urine, and all foreign substances are fruitful sources of infection of the peritoneum, septic very likely in its results.

Therefore, when once we resolve to do any operation that is to involve the continuity of the peritoneum, we should protect peritoneal surfaces with great care.

In doing resections of the stomach, intestinal tract, or similar operations, I am more and more impressed with the importance of bringing peritoneal surfaces in contact with each other with as little exposure of underlying tissues as possible.

The peritoneum is very choice in its associations and does not tolerate well being brought in contact with anatomical structures differing in development and growth.

When leaving the peritoneal cavity cleanliness should be observed in every respect. If the contents of the hollow viscera have escaped, here we are justified in mopping out as carefully as possible peritoneal pockets and surfaces. Undoubtedly in some cases the cleansing with hot normal salt solutions becomes necessary, but great care should be exercised that we do not carry offensive material to other peritoneal surfaces to do post-operative harm.

Special attention should be given to the peritoneum in the operation of gastrectomy, covering the denuded surfaces, particularly

when there has been a free dissection of lymphatic glands and anatomical structures posterior to the stomach, and great care should be exercised in bringing together the surfaces of the peritoneum as cautiously as possible. If this latter is not possible, then such cases are proper for careful consideration as to drainage.

One cannot well speak of the toilet of the peritoneum without referring to drainage. I am satisfied that when we are operating in the neighborhood of the posterior wall of the stomach, either for relief of pathological conditions or the repair of traumatisms, we must ever have in mind that there is danger of an oozing, serous, bloody, or otherwise, and that we ought, in a few cases, to do a posterior drainage directly up through the lateral walls or through the peritoneal pouch on the right side, or in some manner to establish a perfectly aseptic outflow of material that may accumulate and otherwise do great harm. Various forms of gauze drainage may be employed, and will continue to be used by certain operators.

In closing the wound, and when I realize that there has been a large surface of the anterior wall of the stomach included in the sutures, I am frank to say that I always feel easier to bring it close up under the abdominal wound, put in drainage of gauze, to be left for one or more days, and have no reason to regret having done so.

A combination of gauze, glass, and non-compressible rubber drainage is desirable at times when protecting the peritoneum.

We must ever remember that the peritoneum is our great friend up to a certain point, but if overcome in its phagocytic work, then it becomes exhausted and no longer aids us in the recovery of our patient. We must keep it in a healthy normal condition, if possible.

In all our operations proper attention should be paid to the warmth of the peritoneal surfaces and no sudden chill or exposure to cold permitted.

In the toilet of the peritoneum the subject of the selection of ligatures will continue to absorb our attention. My own preference—perhaps this is due to my early education—is in the direction of as fine silk as can be used, although catgut is employed by some surgeons with success. I am always distressed when I see or hear of anyone using chromicized catgut. Buried sutures of silver wire I seldom find to be necessary.



## REPORT OF A CASE OF TETANUS

*Read before the Medical Society of the County of Saratoga, September 22, 1903.*

By DOUGLAS C. MORIARTA, M. D.

*Gentlemen of the Society:*

At the request of your president, I present the history of this case of tetanus for your consideration.

Tetanus is always an anxious and alarming condition to the physician, as well as to the family. It is essentially a fatal disease, without specific treatment or well-formulated ideas concerning its management. Fortunately, however, tetanus is not common with us, except the Fourth of July epidemics of recent years. Internal treatment comprises the antispasmodics, (physostigma, chloral and bromides), the carbolic acid treatment, and latterly the treatment by antitoxine. Locally, we excise the area that is in all probability infected, as it is taught that the bacilli remain localized in the wound and do not enter the circulation; while the toxins are absorbed, and are the direct cause of the condition, though, if we accept the conclusions of Von Oettingen and Zumpe, the bacilli do not remain localized in the wound, but find their way into the circulation. In their experimental work, these men took the heart and spleen of an animal that had died of tetanus and place them in an ordinary alkaline bouillon; afterward the smear preparation showed a mixture of cocci and bacilli. An injection of this culture in mice and other animals produced tetanus. The conclusion was justified that the bacilli were present in the heart's blood and had grown aërobically. Again they examined forty-five animals that had died from tetanus, and in twenty of the forty-five animals they found tetanus bacilli in the cultures from the internal organs as early as the second day. They were also able to find the bacilli in tissue sections stained by Gram's method. Their technique was to take a part of the organ to be examined and place it in the moist chamber of an incubator, without excluding the air; they were able to demonstrate the bacilli in the expressed juice after two or three days. For sections, the tissues were hardened with sublimate and alcohol. They conclude, as they found the bacilli in the different organs, that they must have been disseminated by the blood current.

If their conclusions are correct, we should modify our extreme surgical ideas in relation to the importance of removing all the injured tissue; as we have thought it proper and necessary at times to sacrifice a limb to save the life of our tetanic patients.

The prognosis of tetanus depends upon the period of incubation; if the treatment is to be by antitoxine, on the early recognition and method of administration; if by antispasmodics, upon our courage to take our patient to the point of extreme toxæmia by our remedies; surgically, whether the bacilli remain localized in the wound, or whether they enter the general circulation, as proven by Von Oettingen and Zumpe. If their conclusions are correct, we should not subject our patients to the risk of anæsthesia and the danger of the concomitant operation.

Many authorities recommend intra-cranial administration of the antitoxine. But when we consider that no claim is made for any local contact effect, I cannot appreciate that it makes any difference whether the antitoxine enters the circulation by the cellular or the cerebral tissues. Unless such fact is established, the trephining of the skull and penetrating the brain substance to inject antitoxine with the risk of an infection is reprehensible.

I. D., male, American, aged fourteen; came under my observation July 14th, with the history that he had received an injury on June 24th, twenty days previously, by his clothing being caught in the cog-wheel of a printing press and his knee drawn in and lacerated. The lacerated area was about eight inches long and three inches wide and one-half inch deep on the anterior surface of the leg, including the region of the knee, with strips of healthy tissue running across, perhaps one-quarter inch wide, at intervals of three-quarters of an inch.

About July 12th, two days previous to this time, the patient began to complain of pain in his chest and stiffness in his neck. The corners of his mouth were drawn down, but this was thought to be due to the patient's peevishness and was not appreciated as the sardonic grin of tetanus. On the morning of the fourteenth of July he could not open his jaws to the full extent, there was slight rigidity of the muscles of the body, in addition to those of the face and neck. At this time the diagnosis of tetanus was made, and he was referred to my service in the charity ward, probably in the third day of his tetanic manifestations.

He was at once given hypodermatically ten cubic centimetres of antitoxine in the cellular tissue, and a full dose of calomel by the mouth. Within four hours the lacerated area was dissected away and the dissection extended well into healthy tissue, the wound skin-grafted and dressed with gauze wet with normal salt solution. A second dose of ten cubic centimetres of antitoxine was given, which was all that was available,

until a quantity of tetanus antitoxin was procured from the State Laboratory. On its arrival at nine o'clock P. M. and every eight hours thereafter, he was given fifty cubic centimetres subcutaneously from July 14th to July 21st, making a total of eight hundred cubic centimetres.

When I first saw him his respirations were twenty-six, pulse 128 and temperature 100°. At no time did his temperature go higher than 102°, and his pulse came down on the fifth day of the treatment with antitoxine to eighty-six, and fluctuated from eighty-six to 100 thereafter.

The patient complained exceedingly of pain in his back, neck and chest. The paroxysms became very frequent, and were caused by any motion of the body, noise or jar. Shortly they became almost continuous and chloral hydrate was added to the treatment; the first dose, thirty grains, was to be given by the rectum and repeated as required. He had the first dose on the fifteenth of July, at six o'clock, and the doses were continued with more or less frequency, as the later history will show. Our guide for the quantity of antitoxine was the State department; their directions were to use the antitoxine freely and we did. If antitoxine is proved to have value, and large quantities are to be employed, I shall soon expect to see it used exclusively intravenously in large doses, as it is not only most painful to inject two ounces in the cellular tissues, but it is required several times a day, and the patient is sure to be irritated by its injection and so convulsions are brought on. In addition the quantity of antitoxine employed early must be proved to be a material factor.

I will ask your indulgence while I read the daily history of the alarming period of the patient's disease.

First day under antitoxine, probably the third day of the tetanic symptoms and the twentieth day from the injury: The maximum temperature was 100°, pulse 128, respirations twenty-eight. The patient complained of pain in his back, particularly at the neck. The muscles at the base of the neck were rigid, and he was only able to open his jaws about one-half inch; deglutition was painful, and the patient was peevish and restless. The patient at once submitted to an operation under chloroform anæsthesia, and the injured tissues were removed by dissection, the wound skin-grafted and dressed with normal salt solution. Patient was given an injection of two immunizing doses of antitoxine, one before the operation and a second similar injection two hours later; and at eight o'clock a third injection of fifty cubic centimetres.

Second day of the antitoxine treatment, and fourth day of the tetanus: Maximum temperature 100°, pulse 124, respirations twenty-eight. The jaws were more markedly set, with intense paroxysms of contraction of the muscles of the back every five or ten minutes, practically continuous. The patient was very irritable, crying almost constantly, and any noise bringing on the paroxysms of pain. He has slept about two hours. The paroxysms were influenced by noises, moving his body or attempting to swallow. At nine o'clock he had his first convulsion, which was very slight, though general.

Midnight, second day: The convulsions were continuous, at intervals of five or ten minutes, and of about thirty seconds duration. If he dropped to sleep, the convulsions would awaken him. They affected the diaphragm and made respiration painful, labored and difficult. At these times there was a condition of opisthotonos. During the past twenty-four hours he had received 100 cubic centimetres of antitoxine and sixty grains of chloral.

Third day of antitoxine and fifth of the disease, noon: The patient has not slept any since midnight, the rectum had become irritated. We accordingly gave him thirty grains of chloral by the mouth, which was retained, and was followed by an hour's sleep. He awakened with a convulsion, which re-occurred every five or ten minutes. At three A. M. he was given another thirty grains of chloral; he then rested until four o'clock and was awakened with convulsions which continued until five-fifteen A. M., at intervals of five or ten minutes. He then slept until five-forty-five A. M., when he was again awakened and had three convulsions in ten minutes. At six-ten he was awakened with a convulsion and had four in ten minutes. He complained of severe pain all over his body, and particularly in his legs and back, and there was a distinct spasm of the muscles of deglutition when he tried to swallow. During this period, ninety grains of chloral and fifty cubic centimetres of antitoxine were given.

Midnight: Patient is more irritable if possible and cried continuously with pain in his chest. Had had convulsions continuously, and had not rested at all during the past twelve hours, although he was given sixty grains of chloral. This was all we felt we were justified in giving, as he had had ninety grains the twelve hours previously, making a total of two and one-half drams in the twenty-four hours.

Noon, fourth day of antitoxine: Patient had cried incessantly with the pain in his chest and back with convulsions occurring every five or ten minutes during the past twelve hours, entirely preventing sleep. Has been markedly delirious. Was given forty-five grains of chloral in divided doses and one dose of antitoxine, fifty cubic centimetres, at nine-fifty.

Midnight, fourth day: Patient had not slept at all, suffering continuously from pain, having convulsions constantly until thirty grains of chloral were given at ten-thirty, when he slept for an hour. The past twelve hours he had had sixty grains of chloral; also fifty cubic centimetres of antitoxine.

Fifth day of antitoxine: Respirations twenty-six, pulse 126 and temperature 100°.

12 M.: Past twelve hours patient has been more quiet, the convulsions lighter and at longer intervals; slept in all two hours during the twelve, and had forty-five grains chloral, and the usual dose of antitoxine.

Midnight, same day: Patient had a most comfortable day with only a few slight convulsions. Had fifty cubic centimetres of antitoxine at seven o'clock with forty-five grains chloral.



Sixth day of antitoxine, eighth of disease:

12 M.: Patient had had comfortable night and morning. Was given two doses of chloral and one of antitoxin.

Midnight: Patient had had a quiet day and no convulsions during the past twenty-four hours. Respirations twenty-four, pulse ninety-six and temperature ninety-eight and six tenths.

Seventh day of antitoxine, six A. M.: Patient has had a comfortable night and has had no convulsions in thirty-six hours, and is free from pain.

The daily history from this on, is not material, as the patient continued to improve steadily. Though free from pain and convulsions, his jaws were still set, and there was considerable muscular rigidity present. The nourishment was of necessity all liquid and swallowed with effort. At each act of deglutition there was a peculiar accentuated click. He eventually recovered, although it was on the twenty-ninth day before the jaws completely relaxed.

It would be of value to the profession if we could determine the value of antitoxine, if any, in this case. But I find it quite impossible to make any deductions as to its value, because the onset was eighteen days after the injury, these late cases being the ones that usually come through. The symptoms were very slight at the onset and grew steadily worse. One author states that these late cases usually get well in spite of treatment! Further, the advocates of antitoxine make no claim for it after thirty-six hours from the initial symptoms, and it was certainly sixty hours, perhaps more, before the first injection was given.

Though antitoxine was being injected, the first four days the patient grew steadily worse, which would indicate that the infection was decidedly virulent in character. Chloral was employed as stated, but with both remedies the patient's condition grew worse until on the fifth day of the antitoxin when it began to improve. There was no rash or sepsis following the injections, nor was the temperature or pulse affected immediately after an injection. The respirations were painful and difficult after each injection; but the injections were so painful that we thought the physical condition the exciting cause rather than the antitoxin *per se*. There were no muscular nervous symptoms, other than those usually present in this disease.

## Editorial

About this time a typhoid fever struck him down, and for several weeks he was at death's door. He had three very eminent physicians, either of whom might have sat for the portrait of Dr. Sangrado, but by dint of an ample inheritance of vitality he withstood both drugs and disease; and presently, taking counsel of a sensible friend, threw physic to the dogs, and recovered strength by means of a judicious diet and horseback rides in the country. One of the doctors lost his temper and stormed about empirics and quacks; the other showed more candour.

JOHN FISK.

Thomas Hutchinson,

*Last Royal Governor of Massachusetts.*

**Typhoid  
Bacilli  
and Ice**

Some eight or ten years ago bacteriologists held firmly to the belief that the imprisonment in ice of typhoid bacilli did not impair their vitality, and a short time afterward it was equally positively asserted that this opinion had been reversed, and that prolonged freezing was incompatible with existence of this germ. The subject was officially investigated by Sedgwick, Winslow and Park, in 1901, in a study of the Boston ice supply, and these observers reported that "ice more than three weeks old is sanitarily as safe as a well-filtered water supply." An interesting contribution, reversing this decision, is made by Drs. R. H. Hutchings and A. W. Wheeler, to the October, 1903, issue of the *American Journal of the Medical Sciences*. At the St. Lawrence State Hospital, near Ogdensburg, N. Y., typhoid fever has been endemic since 1890, when the hospital was organized. At this hospital the intake for water arises in the St. Lawrence river, at a point where an enormous volume of apparently clear, blue water flows over a rocky bed in a rapid current. This water supply was eventually condemned; boiling, filtration and other methods of purification were instituted, and the typhoid fever was under control. In October, 1902, after immunity for two years, typhoid again appeared in an epidemic of thirty-nine cases. Careful inquiry was made into the source, and water, oysters and vegetables were in turn eliminated. "There remained only the ice to be considered, and one point of interest in this connection is that about six days before the first cases developed a new ice-house had been opened, from which none had previously been withdrawn that year. The ice had been taken from the St. Lawrence river and had been

stored since February, a period of more than seven months." This ice was examined at the hospital, and "some of the cakes contained foreign substance in the form of dark brown, granular matter, solidly frozen in the ice. These cakes were broken and the portions containing the foreign matter removed." Colonies derived from this foreign matter presented the characteristics of the typhoid bacillus; the culture grew readily on nutrient agar; in broth no pellicle was formed; in lactose media no fermentation occurred; on potato the growth was invisible; in litmus milk the reaction was faintly alkaline and no coagulation occurred; with the serum of typhoid fever patients characteristic clumping was produced, and the bacillus was actively motile and resembled the bacillus typhosus. In three autopsies characteristic intestinal and abdominal lesions were demonstrated.

The work of Drs. Hutchings and Wheeler appears to have been carefully done, and the question of the viability of the typhoid bacillus in ice must yet be considered open.

## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, SEPTEMBER, 1903.

### Deaths

	1901	1902	1903
Consumption .....	17	16	18
Typhoid Fever .....	4	2	1
Diphtheria and Croup .....	3	1	1
Scarlet Fever .....	0	0	2
Whooping-cough .....	1	1	0
Measles .....	0	0	0
Cancer .....	7	3	12
Pneumonia .....	2	6	6
Broncho-pneumonia .....	0	1	0
Apoplexy .....	13	3	6
Bright's Disease .....	13	11	7
Accidents and violence .....	3	8	4
Seventy years and over.....	21	14	26
One year and under.....	25	19	19

*Deaths in Institutions*

Albany City Hospital .....	7	7	21
Albany Orphan Asylum .....	0	0	1
County House .....	1	5	3
Home for Aged Men.....	4	0	0
Homeopathic Hospital .....	2	2	2
Hospital for Incurables .....	1	0	1
Little Sisters of the Poor.....	1	0	2
Public Places .....	2	0	2
St. Francis de Sales' Orphan Asylum.....	0	0	3
St. Margaret's House .....	8	4	4
St. Peter's Hospital .....	6	4	2
<hr/>			
Total number of deaths.....	138	119	139
Death rate .....	15.10	13.03	16.90
Death rate this year, less non-residents.....			15.80
Marriages .....			59
Births at term .....		144	
Still births .....		9	
Premature .....		5	
<hr/>			
Total births .....		158	

In regard to vital statistics, it is a pleasure to notice that the births are being reported promptly and thoroughly: 158 births to 139 deaths is a most satisfactory showing.

The death rate among children is still a large one.

## WORK OF HEALTH PHYSICIANS

Total number of calls made.....	191
Total number of assignments made during the month.....	57
Total number of vaccinations.....	74

## INSPECTIONS

In the Bureau of Markets and Milk, inspection was made of 42 markets, 5 slaughter houses, 2 rendering establishments, 4 hide houses, and 26 milk wagons. Two samples of milk were collected and four tests were made, 4 tests were found to be above the average of 3% in amount of butter fat.

In the Bureau of Sanitation, 64 complaints were made to the department, of which 19 were of privies, 4 of closets, 6 of drains, 1 of plumbing, 2 of wells and cisterns, 6 of water, 1 of filthy yards, 2 of filthy cellars, 8 of filthy premises, 2 of gas, 2 of manure, 1 of stables, 2 of chickens, 2 of garbage, 2 of stagnant water and 3 of dump. Sixty-six inspections were made of which 43 were sanitary inspections and 23 plumbing inspections. Thirty-nine reinspections were made of which 27 were sanitary reinspections and 12 plumbing. Eighteen complaints were found to have been made without cause. Ten nuisances were found to be abated on reinspection, 4 were cleaned and 6 were referred to the commissioner of public safety for further action. Twenty-six notices were served during the month and one citation.



In the Bureau of Plumbing, Drainage and Ventilation 99 inspections were made, of which 61 were of old buildings, and 38 of new buildings. Twenty-five iron drains were laid, 15 connections with street sewer were made, 21 tile drains were laid, 2 cellar drains were put in, 24 cesspools, 32 wash basins, 38 sinks, 32 bath tubs, 14 wash trays, 7 butler's pantry sinks, 2 trap hoppers in yard, 51 tank closets and 2 stable wash stands. One hundred and thirty-six permits were issued, of which 104 were for plumbing work and 32 for building purposes. Three plans were submitted to the department for approval, of which 1 was for an old building and 2 for new buildings. Eight houses were tested on complaint; 4 by the red or blue test, and 4 by the peppermint test. Ten water tests were made. Twenty-one houses were examined on complaint, and 16 re-inspections were made. Thirteen complaints were found valid, and 8 were found to have no cause.

It is noticed that but two plans have been filed for new buildings. This shows a disposition on the part of builders to await a more convenient season before proceeding with improvements.

## BUREAU OF CONTAGIOUS DISEASES

*Cases Reported*

	1901	1902	1903
Typhoid Fever .....	21	8	11
Scarlet Fever .....	3	1	11
Diphtheria and Croup .....	43	33	21
Measles .....	1	0	4
Chickenpox .....	0	0	1
Consumption .....	0	0	1
Number of days quarantine for diphtheria:			
Longest..... 37      Shortest..... 7      Average.....			19 1-10
Number of days quarantine for scarlet fever:			
Longest..... 62      Shortest..... 16      Average.....			36
Fumigations:			
Houses..... 16      Rooms.....			37

## ANTITOXINE

Cases of diphtheria reported.....	21
Cases in which antitoxine was used.....	21
Deaths after use of antitoxine.....	1

The one death, after the use of antitoxine, from diphtheria was a male, 11 months old, sick three days, antitoxine was used one hour before death.

## BUREAU OF PATHOLOGY

*Bender Laboratory Report on Cultures taken for Diphtheria*

Initial positive	Initial negative	Release positive	Release negative
9	13	4	11
	Failed.....	2	
Total.....			30

## CAUSE OF DEATH OF CHILDREN UNDER FIVE YEARS OF AGE.

<i>Age.</i>	<i>Chief Cause.</i>	<i>Contributing Cause.</i>
3 months .....	Marasmus .....	
11 months .....	Diphtheria .....	
14 days .....	Spasms, Obstruction of .....	
	Common Duct.....	
9 days .....	Trismus Nascentium.....	
7 months .....	Convulsions .....	
6 months .....	Pneumonia .....	
4 months, 9 days.....	Pneumonia, Pertussis.....	
1 month .....	Catarrhal Pneumonia.....	
9 months .....	Indigestion .....	
3 months, 9 days.....	Acute Colitis.....	
7 months .....	Gastro-enteritis .....	Inanition .....
5 months, 20 days.....	Sub-acute Gastritis.....	Malnutrition .....
1 year, 1 month.....	Rachitis.....	
1 year, 12 days.....	Marasmus .....	
1 year, 10 months.....	Marasmus .....	
8 months, 10 days.....	Marasmus .....	
9 hours .....	Spasms .....	
4 months .....	Marasmus .....	
8 months .....	Marasmus .....	
6 months .....	Marasmus .....	
1 month, 3 days.....	Marasmus .....	
2 months, 2 days.....	Marasmus .....	
3 years, 1 month.....	Convulsions .....	Scarlet Fever.....
2 years, 7 months.....	Tubercular Meningitis.....	
18 days .....	Inherited Lues.....	

## Society Proceedings

### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

The semi-annual meeting of the Society was held in Alumni Hall, on Tuesday evening, October 20, 1903. In the absence of the President, Dr. Merrill, the meeting was called to order by the Vice-President, Dr. John Archibold.

The following members were present: Drs. Archambault, Archibold, Boyd, Bingham, Case, Craig, Curtis, Davis, Elting, Griffen, Lempe, Lomax, Macdonald, MacFarlane, McHarg, Mitchell, Moore, C. H., Mosher, Murray, Pease, Ryan, Sabin, Shaw, Skillicorn, Sweet, E., Sweet, M., Vander Veer, A., Vander Veer, E. A., and Ward.

The SECRETARY read a communication from the President, Dr. Merrill, who regretted his inability to be present.

Dr. WARD offered the following resolution:

WHEREAS, The members of this Society have heard with sincere regret of the terrible bereavement of our respected and beloved President, therefore

*Resolved*, That we tender to him in his affliction our unfeigned and hearty sympathy.

*Resolved*, That the Secretary be instructed to spread these resolutions upon the minutes of the Society and send a copy of the same to Dr. Merrill.

This resolution was passed unanimously by the Society.

1. *Reading of the minutes of the last regular meeting.*

Dr. MOSHER moved that the minutes as printed in the ALBANY MEDICAL ANNALS be adopted. The motion was seconded and carried.

*2. Reception of reports of officers and committees.*

In the absence of the Chairman of the Board of Censors, Dr. J. M. Mosher read the following report:

REPORT OF THE BOARD OF CENSORS, OCTOBER 20, 1903.

*To the Medical Society of the County of Albany:*

The Board of Censors respectfully submit the following report:

At the last report of the Censors, presented at the Annual meeting, May 12, 1903, the facts were submitted relating to an investigation into a case of an alleged illegal practitioner in this city, and in the ensuing election for censors for the current year it was stated that this matter should be followed out.

The first meeting of the Board of Censors was held May 27th, and the Board was organized by the selection of Dr. Steenberg as Chairman, and Dr. Mosher as Secretary.

Rollin B. Sanford, Esq., lawyer, was appointed Legal Counsel of the Board, and the complaint against Antonio Sorgi was placed in his hands. Under date of September 29, 1903, Mr. Sanford submitted the following report, showing that this illegal practitioner had been fined and has left the city. We submit the report of Mr. Sanford, together with his account. The Board of Censors also met upon the 10th of October and accepted the report of Mr. Sanford. The Censors also referred to him some written complaints of laymen who have been victimized by a so-called cancer doctor, and Mr. Sanford is now investigating this case.

ALBANY COUNTY MEDICAL SOCIETY,

BOARD OF CENSORS, ALBANY, N. Y.

*Gentlemen:*

I respectfully report to you in the matter of your complaint against Antonio Sorgi, which you so kindly placed in my hands some months since.

I deemed it unsafe to ask for a warrant on the evidence you placed before me and secured the services of Empire Detective Agency to get more positive evidence. The evidence was easily obtained and on June 1st, 1903, on the complaint of the President of your Board, Dr. Steenberg, a warrant was issued out of the Albany Police Court for the arrest of Sorgi for violation of Section 153 of Public Health Law. Sorgi left the city, however, before the warrant could be served, and was not apprehended until a few days since. He appeared in court by his counsel September 28th, 1903, and was fined by the court \$50.00, which was paid by him, and afterwards paid to me by the City Treasurer. This fine covers, as the statute seems to contemplate, the expense of the prosecution and no charge will be made to your Society.

I enclose my bill receipted, therefore, and take this opportunity to thank you for your favor to me in this matter.

Very truly yours,

ROLLIN B. SANFORD.

The Physicians' Register in the County Clerk's office has been examined, and the following physicians have been found to have registered since the last regular meeting of this Society: Drs. R. Burdett Hoyt, John

Bowman Congdon, James Newell Vander Veer, Archie Irving Cullen, J. Howard Branan, Edwin Perry Hall, all under authority of the University of the State of New York; and Walter Mott, previously registered in Saratoga County, under the authority of a diploma of the Long Island College Hospital, dated 1870.

Respectfully submitted,

B. U. STEENBERG, *Chairman.*

J. M. MOSHER, *Secretary.*

A. VANDER VEER,

WILLIS G. MACDONALD,

A. H. TRAVER.

[Signed]

On motion the report was accepted.

Dr. J. P. BOYD presented the report of the milk committee.

#### REPORT OF THE MILK COMMITTEE.

At the meeting of the Society held one year ago the report of the Milk Committee was approved and the committee given power to formulate certain standards for the purpose of establishing a certified standard of milk. The municipal authorities have done good work and have improved the general standard of milk sold in the city of Albany. Your committee believes that a bacteriological test gives the best index of the cleanliness employed at the barn and in the care and disposal of the milk. A set of requirements was drafted, and sent to every dairyman and milk dealer supplying milk in the city of Albany. Much to the disappointment of the committee there was no response to this circular. Finally an enterprising dairyman, Mr. St. John, of Canajoharie, requested the privilege of supplying "certified" milk. His barn and dairy have been found to comply with the requirements on three inspections. The chemical and bacteriological examination of his milk during the winter and summer have been satisfactory.

The public have not been sufficiently educated to the importance of pure milk for feeding babies and invalids and the sale of this certified milk only averages about forty quarts a day.

It is to be regretted that there has not been a greater demand for sanitary milk. One dairyman in Albany is now planning to erect a model dairy and to furnish certified milk in the course of a few months.

For the first eight months printed labels were supplied to Mr. St. John by the committee each month but as these were expensive and not serviceable it was thought best to furnish paraffin caps on which is stamped the seal of the Society.

While the committee has apparently not accomplished very much this year yet a beginning has been made in this work and the future promises to show much more progress with each succeeding year.

The expenses of the committee, which amount to about thirty-eight dollars, were due to printing and postage of circulars and labels which were sent to physicians and dairymen. This expense will be greatly reduced in future years as it will be unnecessary to send out so many circulars.

Dr. WARD moved that the report be received and the accounts audited. The motion was seconded and carried.



3. *Election of members.*

The Board of Censors presented the names of Drs. Leo. F. Adt, Gerald Griffen, C. G. Hacker, J. P. O'Brien and R. M. Pearse.

Dr. WARD moved that the Secretary be instructed to cast one ballot for the names presented. This motion was seconded and carried.

The SECRETARY cast one ballot and the Vice-President announced the election of Drs. Adt, Griffen, Hacker, O'Brien and Pearce as members of the Society.

4. *Motions and resolutions.* None were presented.

5. *Miscellaneous business.* The Vice-President announced the following committees appointed by the President: Hygiene and Public Health J. D. Craig, M. D., T. L. Carroll, M. D., W. H. Happel, M. D.; Legislation, A. G. Root, M. D., J. H. Mitchell, M. D., A. H. Traver, M. D.; Milk, J. P. Boyd, M. D., R. M. Pearse, M. D., H. L. K. Shaw, M. D.; Secretary's Minutes, O. D. Ball, M. D., S. L. Dawes, M. D., J. F. Rooney, M. D.

Dr. SKILLICORN asked that Dr. Vander Veer be requested to relate the plans of the pending unification of the medical societies in this State.

Dr. VANDER VEER said that all that had been done had been published in the medical journals and he had nothing to add. At a special meeting of the Medical Society of the State of New York held in New York on October 20th, the Society gave the unification committee full power to act in conjunction with a similar committee from the State association. These committees have many things to consider but they have agreed that the name of the reorganized society shall be the Medical Society of the State of New York and that its old and honored charter shall not be interfered with. The county societies will continue in existence. The question of delegate representation is now under serious consideration. The code question does not enter in the discussion. The outlook is very bright and it now looks if everything will be straightened out before the annual meeting of the Society in January.

6. *The Vice-President's address.*

Dr. MURRAY moved that Dr. Case act as chairman during the reading of the address. The motion was seconded and carried and Dr. Case took the chair.

The VICE-PRESIDENT, Dr. John Archibold, delivered an address entitled "A Review of Two Outbreaks of Smallpox in the City of Cohoes, 1901-1902."

At the conclusion of Dr. Archibold's address, Dr. Curtis said it was the customary and honorable usage to move a vote of thanks after such an address and he took great pleasure in making such a motion. The Society had listened with much profit as a paper characterized by personal experience is always valuable and instructive. "Spoken" literature too often deals in generalities.

The motion was seconded and carried and Dr. Case extended the thanks of the Society to Dr. Archibold.

On motion the Society adjourned.

HENRY L. K. SHAW, *Secretary.*

JOHN ARCHIBOLD, *Vice-President.*

## Medical News

Edited by Eugene E. Hinman, M. D.

**CENTRAL NEW YORK ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE.**—The Central New York Alumni Association held its third annual meeting and banquet in Utica, September 30, 1903. The dinner was attended by nearly fifty A. M. C. graduates and ladies, and under the direction of Dr. Tefft, the toastmaster, a pleasant evening was spent by all who were present. The following toasts were responded to: "The Physician's Very Best Partner," by Dr. A. W. Hedden, of Syracuse; "The Present Status of Physicians and Medical Schools," by Prof. Albert Vander Veer, of Albany; a brief address and poem by Dr. Richard F. Stevens, of Syracuse; "Oases in the Life of a Physician," by Dr. Thomas P. Scully, of Rome; "The Physician in the Home," by Dr. Thomas E. Busfield. At the business session, held prior to the banquet, Dr. Tefft delivered his annual address and the following officers were elected for the ensuing year: President, Dr. Merritt B. Fairchild, of Syracuse; vice-presidents, Dr. Arthur C. Hagedorn, of Gloversville; Dr. Leroy F. Hollis, of Laconia; Dr. Ward E. Hunt, of Little Falls; Dr. Israel M. Slingerland, of Fayetteville, and Dr. William T. Hudson, of Auburn; secretary, Dr. Frederic R. Brewer, of Utica; treasurer, Dr. Amos W. Hedden, of Syracuse.

**THE ALBANY GUILD FOR THE CARE OF THE SICK POOR.**—**STATISTICS FOR SEPTEMBER, 1903.** Number of new cases, 44. *Classification of cases:* Dispensary cases receiving home care, 1; district cases reported by city physician, 1; charity cases reported by other physicians, 20; total number of charity cases, 23; patients of limited means, 21; old cases still under treatment, 21; total number of patients under nursing care, 65. *Classification of diseases, (new cases).* Medical, 11; surgical, 4; 15 mothers and 13 infants under professional care; dental, 1. There were no patients removed to hospitals and no deaths during the month.

*Special Obstetrical Department:* Head obstetrician in charge of all cases; medical students in attendance, 3; Guild nurses, 2; patients, 2. Number of visits by medical students, 11; by Guild nurses, 13; total number of visits for this department, 24.

*Visits of Guild Nurses (all departments):* Number of visits, with nursing treatment, 569; for professional supervision of convalescents, 150; total, 719. Cases were reported to the Guild by the city physician and by fourteen other physicians.

**COLLEGE OF PHARMACY OPENS.**—The opening exercises of the College of Pharmacy were held in Alumni Hall, Monday evening, October 5th. Dr. Tucker, the president of the college, conducted the exercises, and after his address of welcome to the students, he introduced Prof. Garrett Dillenbeck, who delivered the address of the evening on the subject of "Pharmacy." Chancellor Raymond then made a short address to the students and was followed by Dr. Albert B. Husted. Thus far there is an increase of about fifty per cent. in attendance over last year.

**IMPROVEMENTS AT ST. PETER'S HOSPITAL.**—By about the middle of November St. Peter's Hospital will have been entirely renovated and transformed into a strictly up-to-date hospital in every particular and a large addition completed which will just about double the capacity of the institution. Nothing has been left undone to make the service as perfect as possible. The lighting as well as the telephone system and all of the furniture will be of modern style and this compact hospital should prove even more useful than it has been in the past.

**MEDICAL SOCIETY OF THE STATE OF NEW YORK.**—The fall meeting of this Society was held in the New York Academy of Medicine, on October 13th and 14th. The morning sessions were given to the reading and discussion of valuable papers on miscellaneous subjects. The first afternoon session was devoted to a symposium on the Roentgen Ray, and the second afternoon session to a symposium on typhoid fever.

At a special meeting of the Society held on the evening of Oct. 13th, arrangements were made whereby the Medical Society of the State of New York and the New York State Medical Association are to be merged into one association and hereafter at the annual meetings of the Medical Society of the State of New York the entire regular school of medicine in this State will be represented, all differences as to ethics having been eliminated.

**CONFERENCE OF CHARITIES AND CORRECTION.**—The Fourth New York State Conference of Charities and Correction will be held in Buffalo, November 17 to 20. All who are officially connected with public or private charitable or correctional work in New York State, or who take an active interest therein, are invited to enroll themselves as members of the Conference, and to attend its sessions. There are no other tests of membership, and no membership fee is charged, the expenses of the Conference being met by voluntary contributions. The morning and afternoon sessions will be held in the assembly room of the Iroquois Hotel and the evening sessions in the hall of the Twentieth Century Club on Delaware Ave.

**NEW YORK STATE MEDICAL ASSOCIATION.**—At the Twentieth Annual Meeting of the New York State Medical Association, held in New York City Oct. 19th, delegates from all the New York Medical County Associations were present. At the suggestion of President Wiggin it was decided to insist that the American Medical Association, the National organization, be incorporated by a special act of Congress. The Association favored annual examination of the eyes of school children and the passage of laws which will prevent the so-called "eye specialists" from treating cases properly belonging to licensed physicians.

The following officers were elected: President, William Harvey Thornton, Buffalo, N. Y.; vice-president, Charles F. Payne, Sullivan Co., N. Y.; treasurer, Frank A. Baldwin, New York City; secretary, Guy D. Lombard, New York City.

**TO INSPECT SUMMER RESORTS.**—The next Legislature of this State will be asked to give the State Health Commissioner sufficient funds to carry on an inspection of summer resorts. The vital statistics show that typhoid



fever usually makes its appearance in this State after people return from their summer vacations and in the spring after their return from southern hotels. Dr. Lewis desires to make careful inspection of water supplies, garbage disposal, plumbing work and other conditions affecting the public health at summer resorts with a view to remedying the trouble.

**FAITH HEALER CONVICTED.**—On October 13th, 1903, an important decision was handed down by the Court of Appeals in the case of the People agt. Pierson, declaring dependence on faith healing in a case of sickness to be criminal negligence. Pierson's child died from broncho-pneumonia, he having refused to call in a doctor.

The opinion was written by Justice Haight of the Court of Appeals who severely arraigned not only the "faith healers" but also all of the allied cults. This decision will be used as a basis upon which to work in the Christian Science cases now awaiting trial in this State and elsewhere.

**AMERICAN CONGRESS ON TUBERCULOSIS.**—The next regular meeting of the American Congress on Tuberculosis will be held in Washington, D. C., April 4, 5, and 6, 1905. The first three officers of the Congress are: Hon. President, Dr. Henry Holton, Brattleboro, Vt.; president, Dr. Daniel Lewis, New York; secretary, Dr. George Brown, Atlanta, Ga. Representatives to this Congress have been chosen by many medical societies and other bodies entitled to representation.

On account of the International Congress on Tuberculosis, to be held in Paris next year, it has been deemed advisable that the American Congress hold its meeting the following year, as it also, will be international in scope.

**THE PREVENTION OF TETANUS.**—At the Twenty-ninth Annual Session of the Mississippi Valley Medical Association held at Memphis, October 7-9, the following resolutions were adopted:

In view of the fact that more than 400 deaths from Tetanus occurred following the 4th of July celebration of 1903, as shown by the statistical report elaborated by Dr. S. C. Stanton, of Chicago, and published in the *Journal of the American Medical Association* of August 29, 1903, the great majority of which might have been prevented had proper precautions been taken: therefore

*Be it Resolved*, That the conclusions which follow, as offered by Dr. Stanton in a paper presented before the Association, at the above meeting, be endorsed as the sense of the Association, and further

*Be it Resolved*, That the Secretary be instructed to forward a copy of these resolutions and conclusions to the Medical Press, Associated Press, and the Secretaries of the several State Medical Societies, with the request that they publish same and take suitable action thereon.

1. Enforcement of existing laws regarding the sale of Toy Pistols and other dangerous toys.

2. Enactment of laws of the nation, states and municipalities prohibiting the manufacture and sale of Toy Pistols, Blank Cartridges, Dynamite Canes and Caps, Cannon Crackers, etc.

3. Open treatment of all wounds, however insignificant, in which from the nature or environment there is any risk of Tetanus.



4. Immediate use of Tetanus Antitoxin in all cases of Fourth-of-July wounds, or wounds received in barn-yards, gardens, or other places where Tetanus infection is likely to occur.

5. As a forlorn hope, the injection of Tetanus Antitoxin after Tetanus symptoms have appeared.

PERSONAL.—Dr. THOMAS H. CUNNINGHAM (A. M. C. 1900), has resigned his position as assistant surgeon at the State Soldiers and Sailors' Home at Bath, N. Y., owing to ill health, and has returned to his home in Sandy Hill, N. Y.

—Dr. HARRY E. MERENESS (A. M. C. 1902) has been appointed a medical interne in the Hudson River State Hospital at a salary of \$800 a year.

—Dr. FRANK D. BIGAREL (A. M. C. 1900), is a candidate for member of Assembly on the Democratic ticket. Dr. Bigarel resides in Port Leyden, N. Y., where he has started a very good practice.

—Dr. HUGH M. COX (A. M. C. 1902), has completed his term of service in the Troy Hospital and has opened his offices at St. Nicholas Avenue and 126th Street, New York City.

—Dr. CHARLES R. CONKLIN (A. M. C. '99), has moved to No. 168 East 62nd St., New York City.

—Dr. CHARLES GARTNER (A. M. C. 1895), Secretary of the Albany Medical College Alumni Association of Greater New York, has moved to 774 Baskwick Avenue, Brooklyn, N. Y.

—Dr. HARRY E. BATTIN (A. M. C. '97), is practicing in Corning, N. Y.

BIRTHS.—To Dr. GEORGE C. MERRIAM (A. M. C. '97), and wife, at Scranton, Pa., October 8th, 1903, a daughter, Elizabeth Rule.

DEATHS.—Dr. THOMAS JEFFERSON BARTON (A. M. C. '55), died Sept. 11th, 1903, at the Albany City Hospital.

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## In Memoriam

NEWTON C. HARRIS, M. D.

At Schuylerville, N. Y., August 6th, 1903, died Dr. Newton C. Harris, aged seventy-three years. Dr. Harris was born at Townsend, Vt., May 12th, 1833. After a preliminary education in the public schools and at Leland and Grey Seminary he entered the Albany Medical College, from which institution he graduated in 1857. He spent about four years in practice at Lakeville, N. Y., removing from that place to Schuylerville, N. Y., where he remained until 1864 when he enlisted as assistant surgeon of the 155th regiment, N. Y. Vols. He remained in the service until the close of the war. Since that time he has been an honored and active member of his profession in Schuylerville until November, 1901, when an apoplexy stopped his labors, and resulted in his death. Dr. Harris was always foremost in any movement to advance the welfare of the community and his loss will be keenly felt by a very large circle of friends.

The funeral was held on Sunday, August 8th at his birthplace, Townsend, Vt. He is survived by his widow, two sons, and one daughter.—*The Schuylerville Standard.*

## DANIEL B. HOWARD, M. D.

Dr. Daniel B. Howard died at his home in Warrensburg, N. Y., of heart disease, September 21st, 1903. Dr. Howard was in his sixty-third year. In his youth he manifested a preference for his father's profession and as soon as he arrived at a suitable age he entered the Albany Medical College whence he graduated with honors with the class of 1865. He then began the practice of his profession in Warrensburg, N. Y., in partnership with his father, Dr. E. W. Howard, and for forty years has been very successful. Dr. Howard was an ex-president of the Warren County Medical Society, a vice-president of the District Medical Association and a member and treasurer of the local board of United States Pension Examiners. He is survived by his wife, a daughter and one sister.

## THOMAS J. BARTON, M. D.

Thomas J. Barton, M. D., died at the Albany City Hospital Friday, September 11th, 1903, aged seventy-three years. We are indebted to the *Tivoli Times* for the following sketch of his life. Dr. Barton was born in Valatie, N. Y., on the 18th of February, 1830. After receiving his early education in the Claverack School he entered the Albany Medical College, where he graduated in 1855. Dr. Barton has practiced nearly all of his life in the vicinity of Tivoli, N. Y., where he has been prominent in social and political life as well as in medical circles. He was appointed post-master of Tivoli, in 1889, and served four years. He was once coroner of Dutchess County, and at the time of his death was health officer of the village. Dr. Barton was a prominent member of the Dutchess County Medical Society and was once its vice-president. His funeral was held at the home of the Misses Jenkins in Hudson, Sunday, September 13th, 1903, and was in charge of the Masonic Fraternity, in which he was a past master. Dr. Barton never married and his only surviving relatives are two brothers, two sisters, seven nephews, and five nieces.

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## Book Reviews

*Manual of the Diseases of the Eye.* For Students and General Practitioners.

By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, etc. Third Edition, Revised. With 275 Original Illustrations Including Sixteen Plates, with Thirty-six Colored Figures. New York: William Wood & Company, MDCCCIII.

This book well deserves the honor of a third edition. It is a hand-book for the ready use of the practitioner who wishes a reference work for aid in the differential diagnosis and treatment of anomalies and diseases of the eye. Such works are fully as valuable in a medical library as exhaustive treatises, which they supplement. And they are fully as difficult to prepare. In the matter of conciseness and abridgement the author has been fully successful, and his book is a worthy successor of Nettleship's manual for students and practitioners, which so long held the post of honor in this special field. The plates are to be especially commended.

*A System of Physiologic Therapeutics.* A Practical Exposition of the Methods, other than Drugging, Useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A. M., M. D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College; Physician to the Jefferson Medical College Hospital, and to the Philadelphia, Jewish and Rush Hospitals, etc. *Volume viii. Rest, Mental Therapeutics, Suggestion.* By FRANCIS X. DERCUM, M. D., Ph. D., Professor of Nervous and Mental Diseases in the Jefferson Medical College of Philadelphia, etc. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street, 1903.

This volume is divided into three Parts, upon respectively, (1) Rest, (2) Therapeutics of Mental Diseases, and (3) Suggestion. In the general discussion of Rest are included chapters upon Neurasthenia, Hysteria, Hypochondria, and other functional and some organic nervous diseases. The chapters upon Neurasthenia, Hysteria and Hypochondria describe and differentiate these conditions, and show the predilection of the author for modified rest treatment, in which exercise plays some part. The section upon mental diseases reveals the indecision as to classification and grouping since the introduction of Kraepelin's ideas, which are not yet generally comprehended. The author is naturally favorable to home treatment of mental cases, and, necessarily, a student of the effects of sedative drugs. These are dangerous remedies for use in such prolonged diseases as functional nervous and mental disorders. Under his own skilful observation he may secure results, but the general readers of his book, who seek, without definite experience, to follow his directions, will come to grief. The institutions are now constantly receiving cases whose original psychosis or neurosis has been complicated to a dangerous degree by the ill-advised exhibition of these remedies.

The book is a cursory and personal sketch of the subjects under consideration, and not a deep study. It takes its place in the series as an essential part of the scheme of the publishers. Of the eleven volumes nine have now been issued; those upon Mechanotherapy and Serotherapy are yet to come. A large amount of information is contained in these volumes, and it has been admirably arranged for reference. As is usual in such "systems," there is some unevenness, but the field has not otherwise been covered. The work of the publishers is excellently done.

*Transactions of the Medical Society of the State of New York for the Year 1903.* Published by the Society, 1903.

The Transactions of the State Society for 1903 make a volume of 514 pages. Among the reports of committees that of the committee on conference is of special interest and should be read by every physician in the State. There are two addresses of unusual merit, one by the President of the Society, Henry Reed Hopkins, M. D., on "Progress, Liberty, Unity," and the other by Charles A. L. Reed, M. A., M. D., on "Rudolf Virchow: an Appreciation." Among the forty-one papers there are many valuable contributions. A Symposium on Arterio-Sclerosis consists of seven papers which form a welcome addition to the rather scanty literature on the important subject and a Symposium on Haematology is made up of four



papers written by authorities on the subject. The memorials of Edward Mott Moore, M. D., and of Abel Mix Phelps, M. D., are appreciative and concise. The volume contains the names of the members of the State and County Societies and a list of the incorporated voluntary societies.

R. G. C.

*International Clinics.* A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by A. O. J. KELLY, A. M., M. D., Philadelphia, U. S. A. With the collaboration of Wm. Osler, M. D., Baltimore; John H. Musser, M. D., Philadelphia; Jas. Stewart, M. D., Montréal; John B. Murphy, M. D., Chicago; Thomas M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh; John Harold, M. D., London; Edmund Landolt, M. D., Paris; Richard Kretz, M. D., Vienna. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume II, Thirteenth Series, 1903. Philadelphia: J. B. Lippincott Company, 1903.

This volume of *International Clinics* contains so many articles of interest and of value that it is difficult to mention their good points in a brief review. The first six papers are on the subject of the summer diarrhœa of children. In the first of these, "Milk Bacteria and Intestinal Disorders," H. W. Conn. Ph. D., states that the simple determination of the number of bacteria in milk is misleading and practically useless, for the important point is the variety of bacteria present, as the bacterium *lactici* may exist in large numbers in milk that is wholesome, while a small number of some varieties may render milk unfit for food. In "The Causation, Nature, and Prevention of the Summer Diarrhœa of Children" Dr. Alfred Hand, Jr., reviews the recent investigations of the bacteriology of these diseases and says that it is not yet certain how many forms of bacilli cause dysentery. He believes that the best prevention of these diseases lies in avoiding infection rather than in the discovery of a curative serum. Dr. Thompson S. Westcott writes on the dietetic treatment of these summer diarrhœas and, under prophylaxis, he devotes several pages to the care of cows' milk but does not mention the importance of breast feeding. In "The Treatment of the Summer Diarrhœas of Children" Dr. Matthias Nicoll, Jr. gives considerable space to prophylaxis, including the importance of clean streets, better tenements, public parks, and supervision of the milk supply; but he also neglects the subject of breast feeding. In considering drugs he states that bismuth is the only one which has stood the test of time in affecting the bowel.

A. B. Marfane, M. D., contributes "The Treatment of Cholera Infantum" in which he describes his present methods, which have given good results in many cases. He allows nothing by mouth except water for from twenty-four to forty-eight hours. injects salt solution, (adding



caffeine in case of grave collapse), gives warm baths, uses no drugs during the acute stage and does not wash out the stomach or colon, though drugs and washing may be used during convalescence.

In the first of the two articles on disease of the pancreas Dr. Eugene L. Opie describes the rather indefinite symptoms of pancreatic disease in general and then deals with acute hemorrhagic pancreatitis and chronic pancreatitis. In "The Diagnosis and Surgical Treatment of Disease of the Pancreas" Drs. John B. Deaver and George P. Müller give an excellent description of acute and chronic pancreatitis and of cysts of the pancreas and report cases of each.

In the section on treatment Leopold Levi, M. D., contributes an article on "Trunccek's Serum in Arterio-Sclerosis" in which he reports some encouraging results from the use of this inorganic serum in aneurism, dyspnoea due to arterio-sclerosis and in cerebral arterio-sclerosis. In "A Recent Advance in Therapeutics: Local Treatment" Dr. Charles Bouchard states that he has cured acute and subacute rheumatism by local injection of small doses of sodium salicylate and that he has cured syphilitic lesions by similar injections of biniodide of mercury and potassium iodide. He suggests that this method may be used in other diseases. In "The Rest Treatment: When Indicated and How Conducted" Dr. John Madison Taylor gives many practical points and shows the result of much experience. He pertinently states that it is necessary for the physician to be familiar with massage and passive and other forms of exercise if he expects to get the best results.

In the section on medicine Dr. Alexander Haig writes on "The Etiology, Prevention, and Treatment of a Common Cold." He states that a cold is due to collæmia, the local action of cold and a microbe; and that it can be prevented or cured by getting rid of the excess of uric acid by diet or by the use of medicine. The alkaline method discovered by him was advocated by Dr. L. Duncan Bulkeley in 1896. This section contains three excellent articles on heart disease by Louis Fangues Bishop, A. M., M. D., F. J. Poynton, M. D., M. R. C. P. Lon., and Thomas E. Satterthwait, M. D.

In the section on surgery E. Stanmore Bishop, F. R. C. S., contributes his second article on "Abdomino-pelvic Diagnosis" in which he considers abdominal swellings. Dr. D. B. Roncali reports a case of traumatic epilepsy following a fracture of the skull operated on a year and a half after the accident who has now had no convulsion for eight years.

R. G. C.

## Current Medical Literature

### SURGERY

Edited by A. Vander Veer, M. D.

*Surgical Intervention in Stricture of the Oesophagus. (Ueber chirurgische Intervention bei Speiseröhrenverengerung.)*

H. LINDER. *Münchener medizinische Wochenschrift*, No. 6, 1903.

Stricture of the œsophagus may be divided into two great groups, the malignant and the benign. The malignant strictures are of very much more

frequent occurrence than are the benign, and the usual method of treatment is much more typical. The writer advises rather strongly against attempts to maintain the patency of the œsophagus involved in a malignant stricture by means of sounds, believing that as a rule more harm than good is accomplished by the latter.

With regard to the surgical management of these cases, he believes that while it is possible upon the cadaver, upon animals and occasionally upon the living subject to expose the œsophagus, the extirpation of a carcinoma of the same is, in the great majority of cases, impossible and any suture of the resected ends must, under the conditions, be unsatisfactory, if not altogether impossible. A radical operation for carcinoma of the œsophagus is only to be considered when it involves the portion of the organ situated in the neck, and only then when the lower end of the growth can readily be reached. In a large number of cases of carcinoma of the œsophagus observed by the writer only three have appeared to be amenable to a radical operation, which was done upon all three, and all three died promptly. The writer has collected eighteen cases of the kind from the literature which were operated upon, five of which died as an immediate result of the operation, while thirteen survived a comparatively brief period, none longer than two years. The result then, of the radical operation being so unsatisfactory, practically nothing is left but a palliative procedure, the most satisfactory being gastrostomy. The writer reviews the history of the introduction of this operation and discusses the relative merits of each type. He has found them all to be exceedingly unsatisfactory, except that devised by Witzel. The Frank operation, as well as some of the others, do well enough for a few weeks, but the great difficulty in all of them is to retain the nourishment within the stomach and to prevent severe disturbance of the skin, as well as infection of the abdominal wall. The writer believes that the results of gastrostomy will be very much more satisfactory if the procedure is adopted early in the course of the disease before the patient is greatly exhausted and before the new growth has become very extensive. In no sense of the word are the results of gastrostomy for malignant disease to be compared with those of gastro-enterotomy or colostomy in similar conditions.

The results of the treatment of benign strictures of the œsophagus are very much more satisfactory. Most benign strictures of the œsophagus result from some destruction of the mucous membrane of the organ, usually the result of irritants which have been swallowed. In many instances bloodless procedures, such as dilatation of the stricture, etc., are followed by excellent results.

The writer calls attention to two interesting cases of obstruction of the œsophagus. First, that produced by the presence of diverticula, which, as is well known, are not particularly uncommon and frequently manifest no symptoms. The other cause of obstruction is that of foreign bodies which may have been swallowed, most commonly false teeth. The treatment of diverticula which are situated high in the neck is preferably extirpation. Fifteen cases of this kind are reported in the literature, with four deaths. When a benign stricture of the œsophagus cannot be dilated in the bloodless fashion and the nutrition of the patient becomes seriously

impaired, a gastrostomy must be performed. The object of this gastrostomy is usually two-fold; first, to afford a means of supplying nourishment and secondly to gain access to the opening of the œsophagus into the stomach, in order that strictures may be dilated. For this purpose the writer believes that the Frank method of gastrostomy is preferable.

Not infrequently the so-called "endless" method of sounding the œsophagus is practised and this is usually followed by most satisfactory results. In some instances retrograde sounding of the œsophagus becomes necessary. There are but very few cases which are not amenable to some of these methods of treatment, and in most of these cases special methods have to be devised. The writer reports one case in which he was unable to pass a smallest sound through the œsophagus, even after a gastrostomy. In this instance he opened the œsophagus in the neck and was able in this way to pass a small sound through a tiny opening in the stricture.

*Multiple Myeloma of the Bones, with Albumosuria. (Du Myelome Multiple des Os avec Albumosuria.)*

VIGNARD AND GALLAVARDIN. *Revue de Chirurgie*, No. 1, January, 1903,

Most tumors of bone manifest a tendency to become generalized and to metastacize to different organs of the body. A distinct class of tumors of bones, however, may be distinguished, which are primary and multiple in the bones and which do not show a tendency to metastasis to other portions of the body.

The writers call attention to four varieties of tumors of bone which may be confused:

(1) The so-called osseous lymphadenia, which presents clinically as a progressive, pernicious anemia with enlargement of the spleen and lymphatic glands, and which histologically presents as a lymphoid tumor of the bone marrow.

(2) The endothelioma of bone, which is characterized by a tumor, the walls of whose blood vessels are formed directly by tumor cells.

(3) The lymphosarcoma of bone the lesions of which are usually diffuse and histologically present as lymphoid tissue.

(4) The true multiple myeloma of bone.

This name was first proposed by Rustitzky in 1872, but the tumor to which he applied the name appears to have been an endothelioma.

The writers report a case, the onset of which was accompanied by severe and continuous thoracic pain, rapid cachexia, slight fever, and death in coma, the entire evolution of the disease occupying one and one-half months. There was also an albuminuria. At autopsy there were multiple osseous tumors occupying all the ribs and the sternum, and ranging in size from a hazel nut to a walnut. These tumors appeared to be contemporaneous, and it was impossible to distinguish the primary growth. There were no metastases in any of the viscera. Microscopical examination showed the tumor to be a myeloma.

The writers present the main clinical and pathological features in four other cases from the literature, all of which manifested practically the same general characteristics as the case which they described. They call attention to the fact that this variety of tumor is localized exclusively in the

marrow of the bones and appears to have a special predilection for the red bone marrow. The bones most frequently involved are the ribs, the sternum and the vertebræ. Other bones may occasionally present tumor growths.

It is practically always impossible to distinguish any one of these tumors which is older than the others, and hence, it would appear that their development is probably almost simultaneous. They usually vary in size from a pea to a large nut; in rare instances they may be considerably larger.

The tumors do not tend to produce any very distinct enlargement of the bones. Microscopically the tumors are characterized by the presence of large cells, round or cuboidal in shape, with large nuclei which stain well and present a distinct nucleolus. The protoplasm is abundant, and there are neither neutrophile nor eosinophile granules present.

MacCallum has suggested that these represent an embryonic type of the myelocyte.

Diagnosis is, as a rule, difficult. Pain is usually a fairly characteristic feature and is referred to the thorax. Involvement of the vertebræ may lead to paralytic symptoms. The cases usually die in coma, the reason for which it is difficult to explain. Cachexia and emaciation are fairly rapid, and there is usually a mild fever. There is, however, one symptom which appears to be fairly characteristic and that is the presence in the urine of the so-called Bence-albumose. The presence of this body in the urine was first described by Bence-Jones in 1845, and occurred in a case which may very probably have been one of myeloma. Very few instances of the occurrence of this condition of the urine were reported up to within three years, since which time perhaps a dozen cases have appeared in the literature. The characteristics of the Bence-Jones albumose is the fact that it is precipitated at a temperature from 50° to 65° Centigrade, but is again dissolved at higher temperatures, to re-appear upon cooling. Another test for its presence is the addition of nitric or hydrochloric acid, which precipitate the albumose in a cold solution, but the precipitate disappears on heating and reappears when cooled.

This form of albumosuria is to be distinguished from other forms which present a different reaction, and its presence seem to be almost pathognomonic of multiple tumors of the bones.

The writers conclude: (1) Among the different varieties of tumors of the bone one can distinguish a group of neoplasms to which the name of primary multiple tumors of the bones may be given.

(2) The peculiar characteristics of these tumors is their apparently simultaneous development in different portions of the osseous tissue, usually in the red bone marrow, and never accompanied with visceral metastases.

(3) This group of primary and multiple tumors of the bones does not constitute histologically a homogeneous unit, for among them there appear to be tumors which present the characteristics of lymphomata, endotheliomata, and myelomata.

(4) The multiple myeloma of bones presents the following distinctive characteristics: the extreme multiplicity of the tumors, their clinical latency, rapid cachexia, fever, terminal coma, and finally the presence in



certain cases of the Bence-Jones albumose in the urine. Whether this characteristic will prove to be a pathognomonic feature remains for subsequent investigation to show.

## MEDICINE

Edited by Samuel B. Ward, M. D., and Hermon C. Gordinier, M. D.

*Acute Circumscribed Œdema.* (*Das acute circumscribe Œdema.*)

F. MENDEL. *Berliner klinische Wochenschrift*, No. 48, 1902.

Quincke, in 1882, described a condition characterized by an acute swelling of the skin and underlying structures occurring in various parts of the body, especially the extremities, about the joints and often involving the trunk and face. The normal color of the skin is usually retained. The swellings vary from two to ten centimeters in diameter, are very tense and sometimes itchy. The œdema comes and goes quickly and occurs in paroxysms which are often repeated. But few deaths have occurred and those invariably from œdema of the larynx or trachea. The first reported cases of death in this disease were by Osler in 1888, who reported two fatal cases in one family, from œdema of the larynx. Cassirer, in an elaborate paper on this subject, including his own cases and those collected from literature up to 1901, states that the prognosis, *quoad vitam*, is, without exception, good. He believes that in Osler's cases, death was due to some other cause than œdema of the glottis. A year later, however, Griffith, in the *British Medical Journal*, reported the following case. An otherwise healthy woman had had, since girlhood, periodical attacks of swelling in various parts of the body. In 1888, she had, after a trifling injury to the forehead, a serious swelling of the face and throat. This appeared so rapidly that she almost suffocated before the attack passed away. In 1890, a similar attack occurred following toothache. The mouth and larynx were so swollen that immediate tracheotomy seemed necessary. This was not done however, and the swelling gradually disappeared. In 1902, a fulminant attack of œdema of the larynx occurred which caused death in one-half hour after the onset. The autopsy showed a pale, œdematous swelling of the mucous membrane, with complete occlusion of the lumen of the larynx, from the glottis to the true vocal cords.

Mendel reports the following case with a most remarkable family record of the disease. Female, aged eighteen, consulted him for a peculiar swelling of the left arm extending from the points of the fingers to the elbow. The mother stated that she had suffered, from early childhood, with swellings in various parts of her body, such as the arm, leg, mouth, eyes, face and labia. The swellings would appear and disappear suddenly, sometimes following trauma and sometimes from no apparent cause, leaving no trace behind. Her great grandfather died from suffocation. He had a son and a daughter. The daughter was the grandmother of the girl. Both suffered from this disease and finally died from suffocation. The grandmother, according to the girl's statement, developed, one morning, a large swelling of the face and throat, the face became cyanotic and she

died soon after. The daughter of this woman died, in a similar manner, at twenty-two. The father of the girl died at thirty-three. He developed, suddenly, pain in the chest, dyspnoea and cough. The same evening he became hoarse, the dyspnoea increased and in a short time he died. Both of her sisters, during their whole life, suffered from this disease. She has one brother in perfect health and another who has recurrent attacks of rheumatism and chorea. The other branch of the family is also of great interest. The brother of the grandmother died at forty of suffocation immediately after the pulling of a tooth. He left four children. One son died of this disease at twenty-two, one is forty-eight and the other is fifty-one. Both have the attacks nearly every week. The only sister has remained well.

To return to the original case, the girl, apart from these attacks, was in perfect health, was not anæmic, and showed no signs of hysteria or other disease of the nervous system. There was no dermatographia and the greatest irritation brought out no erythema or urticaria. The swellings were of a whitish-yellow color and decidedly cooler than the healthy skin. They were painful on pressure but did not pit. There was no sensory disturbance.

The author treated this case with laxatives and fairly large doses of aspirin. With this treatment, the swellings always disappeared within twenty-four hours while, previously, they would last from five to eight days. While the patient continued this treatment no attacks appeared. In this connection the author mentioned the use of aspirin in a case of "hydrops articularum" which quickly succumbed to its use.

The occurrence of the characteristic symptom complex described by Quincke, in this case and in so many members of her family leaves no room for doubt as to the diagnosis. The author's experience differs decidedly from Cassirer's opinion in reference to the prognosis. This observer states that the disease is never fatal, while of the nine cases in this family group, six died, and it is highly probable that the attacks will increase in severity and end fatally, in those living.

Although Quincke has spoken of the relation between acute oedema and urticaria, Mendel believes they are distinct entities and, while both begin suddenly and involve the skin and mucous membranes with circumscribed serous infiltration, urticaria may be readily distinguished by the universal itching and by finding the characteristic "wheals." In urticaria the wheals always begin in the skin, whereas the swelling in Quincke's disease always involves the subcutaneous tissue first and the skin afterward.

The author states further that all serous infiltrations of the skin which are due to internal or external irritation, the result of certain kinds of food, or by the external or internal use of medicaments such as antipyrin, morphine, mercury, etc., belong to the exanthemata and are not to be classed with Quincke's acute oedema.

In regard to the etiology of this strange disease, the author makes no positive statement but is inclined to believe that it is caused by the periodical absorption, through the intestinal canal of toxines which act as lymphagogues, producing the serous exudate.

*Concerning Chloroma and its Relation to Leukaemia. (Über das Chlorom und seine Beziehungen zur Leukämie.)*

THEODOR GUMBEL. *Virchow's Archiv für pathologische Anatomie, Band 171, Heft. 3.*

In this article the author gives a very careful gross and histological description of a case of chloroma, and discusses the different views regarding the character of this disease. In his case distinctly greenish tumors were situated on the cervical vertebrae, on the sternum, and on the dura mater of the brain and spinal cord, death having been due to pressure on the latter organ. There was also a diffuse chloromatous thickening of the urethral mucous membrane, and infiltration of the cortex of the kidney. There was a general hyperplasia of the lymph glands and the spleen, and the blood picture indicated the presence of leukæmia. The author discusses in the first place whether the tumors in these cases are a peculiar form of sarcoma, as has been stated by some writers. He finds that though superficially they have the structure of a sarcoma, on close examination they are found to be made up of lymphoid tissue, different varieties of lymphoid cells being represented, apparently the same as those that are found in the blood. The changes in the internal organs, especially the fact that in the kidneys and urethra the process was in the form of diffuse infiltration, were also against tumor formation. In regard to the origin of greenish pigment the author has nothing to add to our present knowledge. He discusses the supposition of Chiari that the coloring matter is associated with fine fat droplets, which he states has been disproven. He thinks with Virchow that the coloring matter is contained in the parenchyma of the cells. Several attempts have been made to isolate the coloring matter chemically, but with no very marked success. Possibly it is very similar to a substance known as hæmiverdin, regarding the chemical composition of which he gives no information.

He concludes his article by a short summary describing the picture ordinarily presented by chloroma. The tumors occur, he states, as multiple green lymphomata, which are especially apt to be localized in the periosteum and the immediate neighborhood of the bones. Most frequently the bones of the head and the connective tissue along the spinal column are attacked. The bones of the extremity are practically never involved. More or less frequently the chloroma occurs in the kidneys, liver and lungs. Very occasionally chloromatous changes are found in the breast, testicle, the broad ligament and in the urethra. Associated with the chloromatous change is a hyperplasia of the entire lymphatic apparatus, and especially the marrow of the bones. The blood shows the picture of acute lymphatic leukæmia, so that while only the large leucocytes are increased all the other cells of the blood are decreased, so that the number of white can equal the number of red corpuscles. There may be multiple hemorrhages and superficial ulcerations of the gastro-intestinal tract. The chloromata are not malignant in nature. They lead to death only by compression of vital organs.

## NEUROLOGY

Edited by Henry Hun, M. D.

*Concerning Porencephaly. (Ueber Porencephalie.)*KELLNER. *Monatsschrift für Psychiatrie und Neurologie, Band XII, Heft 6, December, 1902.*

In the institution for epileptics and feeble-minded at Hamburg, Kellner found twenty-one pupils with the characteristic symptom complex of porencephaly—namely, coincidence of epilepsy, psychic defect and hemiplegia, combined with defective development of the paralyzed limbs. Ten of these children were girls and eleven were boys. In seventeen the paralysis was left-sided, and in three of the remaining four, who had a right-sided paralysis, the mental defect was much more profound than in those of right-sided affection. In only four children was the head symmetrical. The asymmetry of the head was shown in nine of the left-sided cases as diminution in size of the right side, and in six others the left side was small (the same side as the affection of the limbs). Of the four children with right hemiplegia, two presented asymmetrical heads, a right-sided and a left-sided enlargement. Hydrocephalic heads were noted in four instances and microcephalic in five, one other presenting a dome-shaped head twelve centimeters in height. Three cases presented certain indications of pressure of the obstetric forceps as a possible cause of porencephaly, one showing a depression at the vertex and two others upon the parietal bones. In only one case was one side of the face smaller than the other, and in four there was a moderate amount of facial paralysis. The shoulder girdle was involved in eleven cases, showing a decreased circumference of an average of six centimeters. Paralysis of the trapezius was present in eight cases. In the arm affections of the extensors were much more common than those of the flexors, seventeen cases of paralysis of the musculo-spiral as against one case involving the musculo-cutaneous, the latter leading to an overgrowth of the triceps, and the former to over-development of the flexors. The musculature of the pelvis and hips was much less affected than that of the shoulder; in only four cases as a result of paralysis of the glutei was there hypertrophy of the cruralis and obturator, holding the thigh in a position of adduction and flexion. The leg, on the other hand, was frequently the seat of severe paralysis, especially in the distribution of the peroneal nerve so that, in connection with the over-development of the calf muscles, walking was very seriously impaired. Disturbances of sensibility were present in nine cases, and were most marked in the hands. As a rule, these sensory disturbances were accompanied by vasomotor irregularities in the skin, cyanosis and subnormal temperature. The reflexes in affected limbs were exaggerated in seven cases, entirely wanting in three, diminished in four, and in the others were normal.

The writer then describes the anomalies of development in the bones, which are illustrated by numerous radiographs.



*Hereditary Aphasia; a Family Disease of the Central Nervous System,  
Due Possibly to Congenital Syphilis.*

STONE AND DOUGLAS. *Brain, Autumn, 1902.*

The authors state this condition was observed in eight members of a family; three cases appearing in one generation and five cases in the generation following. The lesions suggested syphilis as their origin but this was not proven conclusively. The main features of the disease did not appear until adult life and were the following: retention of urine, attacks of temporary aphasia with loss of power on the right side of the body, gradually increasing opacities in the vitreous humor of the eyes, loss or diminution of pain and temperature sense, muscular weakness, epileptiform convulsions, and sudden death preceded by unconsciousness. Wasting of the soft tissues was marked only during the later stages of the disease.

*Author's Case, December, 1897.* A man, aged 23, whose present condition began nine months ago. He was strongly built and had always enjoyed good health. The first symptoms of the disease were retention of urine and loss of sexual functions. This was preceded by attacks of severe pain in the end of the penis. Soon after, he noticed spots in groups before his right eye. Two years later, his retention symptoms were somewhat better, but he still had to use the catheter to empty the bladder. On examination, there was no loss of tactile sensation, but pain and temperature sense was markedly affected. Areas on the arms, abdomen and legs, especially below the knees, were analgesic. The knee-jerks were sluggish. The muscular power was normal and there were no tremors. Smell and taste were normal. There was marked opacities in the vitreous of the right eye, and the left was not clear. The right pupil was smaller than the left, and both reacted sluggishly to light. The discs and choroid were normal. He complained of shooting pains in the legs and twitchings in the lumbar region. Drowsiness was marked. He would sleep twelve hours out of the twenty-four. Hearing was diminished, especially in the left ear. The drum membranes were normal. Aphasia and paralysis were absent up to this time. One year later, after considerable physical exertion, he had an attack of aphasia which lasted one hour. Five months later he had a series of attacks of temporary aphasia with weakness of the right arm. In that time he had lost considerable flesh and had become quite weak. His memory was feeble, his pulse rapid, his legs were smaller and the shooting pains in them became more severe. The areas of analgesia showed no change. The attacks of aphasia became more frequent, so that he had one about every day. During the next spring and summer he improved very much. The attacks grew less frequent and he gained in flesh and strength. In the last nine months of his life, he had but four attacks. These were very severe and were followed by periods of unconsciousness. He died in the last attack.

*Autopsy.* The dura of the brain and cord was intensely congested. Between the dura and the cord was a rusty-colored, gelatinous substance. This was most marked in the lower portions of the cord, but was present over the brain and the rest of the cord. In the cord it was more marked on the posterior aspect, and in the brain, in the fissures of Sylvius and

between the frontal lobes. The surface of the brain showed marked congestion. Otherwise the brain showed no macroscopic changes.

*Microscopic examination.* Sections of the third left frontal convolution were practically the same as those from other regions. They showed a fibrous hyperplasia of the arachnoid tissue with increased vascularity. Sections of the cord showed intense vascularity, especially in its lower portion. The vessels of the dura and pia were increased in size and number. In the arachnoid space, was a relatively large quantity of fibrous material. It was found in different situations among the nerve roots especially posteriorly. There was an extensive round cell infiltration of the periphery of the cord, especially in the neighborhood of the posterior nerve roots. The cord also showed degeneration of the posterior columns. In the lumbar region this degeneration was mainly in the postero-external columns, but further up it was limited to the postero-median columns. The peripheral nerves were normal.

### PSYCHIATRY

Edited by G. Alder Blumer, M. D.

*On the Relation Between Mental States and the Circulation and Respiration. (Ueber die Beziehungen psychischer Zustände zum Kreislauf und zur Athmung.)*.

N. HIRSCHBERG. *St. Petersburger medicinische Wochenschrift*, 1903, No. 2.

The author sets himself the task of answering the following two questions:

(1.) Is it necessary for an external excitation to reach consciousness in order to produce an effect upon the circulation and respiration? and,

(2.) Are the different states of consciousness accompanied by distinct changes in the respiration and circulation, characteristic for each one?

He answers the first question in the affirmative by the following explanation, namely, that in unconsciousness there is no effect from an external irritation; a moderate stimulus in light maniacal conditions excites the attention in passing; whereas the same irritation in an excitable hysterical person causes an unpleasant feeling, or even a sensation of pain.

The second question is more difficult of explanation. Complicated experiments were carried on upon two normal and twenty-eight mentally affected individuals, with Lehmann's plethysmograph, Zimmermann's kymograph and Marey's recording tambour. The subjects of the experiments were placed in a quiet and somewhat darkened room facing one of the walls, so that the element of personal observation was reduced to a minimum. The right arm was placed in the plethysmograph filled with water, and the left upon an immovable table. The kymograph and other instruments were placed upon a table at the left and behind; near these was seated the experimenter. At first, records were made to establish the repose of the subject and to secure consistent results. Then the actual experiments were made with the tuning fork, a pain-producing faradic electrode and unexpected pistol shots, and by passing under the nostrils a solution of sulphuric acid. The tests were continued daily for four weeks and required ten to fifteen minutes each time. The results are summarized as follows:

(1.) Every irritation, in order to produce an effect upon the breathing and circulation must reach consciousness.

(2.) Each state of consciousness is accompanied by certain characteristic changes in the circulation and respiration independently of the character of the underlying irritation.

(a.) In voluntary active concentration of the attention, acceleration of the pulse occurs, and the volume of the arm increases in greater or less degree. The respiration is not necessarily affected, except in accentuated concentration of the attention, when the breathing becomes superficial and irregular.

(b.) Involuntary (passive) states of the attention are practically never attended by changes of the respiration. The volume of the arm and the pulse rate remain unchanged, while the duration of the pulse is increased always.

(c.) During fright the breathing is at first interrupted, and after a few irregular and superficial inspirations returns gradually to the normal. The volume of the arm increases, then declines, and finally again increases to the original size. The changes in the pulse are in the highest degree irregular; very frequently the pulse remains unaltered, in other cases is accelerated, and occasionally is decreased.

(d.) In pain there is first a hesitation of the breathing, after which follow almost always a series of hurried and deep inspirations. With slight pain no changes are noted in the breathing. The volume of the arm diminishes notably, and this frequently lasts longer than the pain. The volume and duration of the pulse beat are lessened, but as soon as the pain begins to subside the strength and duration of the pulse increase with the enlargement of the arm.

(e.) With unpleasant sensations, such as are called forth by disagreeable smell, the volume of the arm and the pulse strength are reduced. The stronger the sensation the more marked the changes.

(g.) The condition of complete tranquility of mind is characterized by an equally restful state of the respiration and circulation. In mental perturbation, hastening and deepening of the respiration appear, and at the same time increase in the volume and intensity of the pulse similar to what occurs during the presence of an unpleasant sensation.

The relations of the circulation and respiration have been studied by Ragosin in mental cases. It was shown that a painful electrical stimulus induced marked changes in the pulse and respiration in maniacal states. These reactions were wanting in cases of mental enfeeblement, and this was in proportion to the degree of the enfeeblement. In coma, after an epileptic attack, they were entirely wanting. In melancholia, the effect of the irritation was very slight or absent, whereas the respiration in these cases reacted as shown above. This all indicates that the irritation, to effect the pulse and respiration, must reach consciousness.

From these considerations it may be stated,

(1.) Every mental state both in normal individuals and in cases of mental disease, entirely independently of differences in the character of the mental disease (assuming the same degree of consciousness), is associated with characteristic changes in the respiration and pulse.

(2.) The atypical reaction mentioned in connection with melancholia is not peculiar to that disease, but depends upon a momentary change in the degree of consciousness.

## BACTERIOLOGY AND HYGIENE

Edited by A. J. Lartigau, M. D.

*The Acid-Resisting Bacilli. (Les Bacilles Acido-Resistantes.)*

COURMONT and POTET. *Archives de Médecine Expérimentales. Vol XV, No. 1.*

In this extensive study Courmont and Potet describe the different forms of acid-resistant bacilli found in butter, milk, and in nature, and compare them with the tubercle bacillus, from the point of view of their morphology, cultural characteristics, agglutinability and pathogenic power. The following are the more important of their conclusions:

1. The designation acid-resisting bacilli must be given to those bacilli which, like the tubercle bacillus, resist decolorization by acids.

2. This class includes bacilli which are very commonly found in milk, butter, earth, manure and forage. They probably all belong to the same species, or to closely allied species. Their place of origin appears to be the earth and plants.

3. Analogous bacilli, distinct from the tubercle bacillus, found either in well or diseased individuals, principally in the external secretions (smegma, mucus, etc.), have, perhaps, close relations with those of butter and of nature, and, perhaps, in certain cases have the same origin. The spontaneous pathogenic power of all these bacilli is not yet proven (the leprosy bacillus excepted).

4. The acid-resistant bacilli of butter and of nature, apart from their characteristics described up to the present, can, like the tubercle bacillus, be cultivated in homogeneous liquid cultures, and acquire under these conditions a certain motility. They are not agglutinogenous in animals to the same degree as most cultures of the tubercle bacillus, and are not agglutinated in the same way.

5. Practically they can be differentiated very easily from the tubercle bacillus in its classical types:

- (a.) By their morphology.

- (b.) By their vitality and their conditions of development (indifference of media, very wide range of temperature requirements, rapid growth on solid media in the form of a thick, shining and chromogenic growth).

- (c.) By their feeble pathogenic power; they only seem to give rise to tubercles under certain conditions.

6. From a theoretical point of view, and taking into consideration the recent discoveries on the variability in the virulence and the life conditions of the tubercle bacillus, one can see that these differential characteristics have only a relative value, in fact:

- (a.) Their morphology may be absolutely identical with that of the tubercle bacillus, either in their natural habitat, in cultures, or in lesions in animals.



(b.) One can obtain cultures of these bacilli very similar to those of the bacillus of Koch, and vice versa, cultures of the tubercle bacillus like those of the acid-fast bacilli.

(c.) One can produce with certain acid-resisting bacilli of butter, or of grain tuberculous lesions having the essential appearances, both macroscopic and microscopic of true tubercles. On the other hand, we see attenuated cultures of the tubercle bacillus that are no more virulent than the acid-resisting bacilli.

*Concerning the Epidemiology of Typhoid Fever. (Zur Epidemiologie des Typhus abdominalis.)*

TAVEL. *Centralblatt für Bakteriologie, Bd. XXXIII, No. 3.*

In this paper the author reviews the whole subject of the transmission of typhoid fever by drinking water, both from the standpoint of the literature, and of his own wide experience as director of the Institute for Infectious Diseases, in Berne. He states that the possible sources of infection in typhoid fever besides infected water are infected milk, infected ice, infected food, digital transmission, transmission through the clothing of infected individuals, and transmission through bathing in infected water. In order to connect an infected water supply with an outbreak of typhoid fever, it is necessary to prove one of three possibilities: first, that the water is contaminated with the dejecta from cases of typhoid; second, that in situations where there is more than one water supply the outbreak is limited to the individuals drinking a particular supply, and third, the direct identification of the typhoid bacillus in the drinking water. The author points out that numerous epidemics have been reported either with the water so contaminated with typhoid dejecta, or, in case of places with more than one water supply, with evidence that the individuals affected all drank one particular supply. The author calls attention once more to the fact that the cases in which the typhoid bacilli themselves have been isolated from drinking water are really very few in number. He assigns the usual causes to this fact, namely, the long period of incubation of the disease so that the bacilli have time to disappear from the water, the antagonistic action of water, and other bacteria, and the fact that but small quantities of water are used. One of the most important facts to be ascertained regarding infected water supplies is the length of time that contamination can exist without reinfection of the water. As the author points out, although typhoid bacillus cannot probably live long in the water of streams and lakes, it can probably exist a considerable time in the mud in the bottom and on the sides. This explains the observation that renewed outbreaks may occur from a previously infected stream after considerable intervals without reinfection of the water taking place. A good part of the author's paper is taken up with the report of a single house outbreak which came under his observation, in which the typhoid bacillus was isolated from the infected water. The epidemic calls attention particularly to the danger of blind ends in water pipes. The house in question received its supply from a water main which terminated in a blind end some thirty feet beyond the intake for the house. One individual after another in the house was attacked

with typhoid fever of a severe type, and the conclusion was finally forced upon the investigating health officer that the water supply must be at fault, notwithstanding the fact that the town was free from typhoid fever. The cases extended over a portion of several months. The blind end of the pipe was finally opened, and, as already stated, the typhoid bacillus was isolated from the water obtained from it. The author does not lay particular stress upon the fact that the typhoid bacillus was isolated. He states that he attaches a good deal of importance to the proof that the typhoid bacillus may remain present in stagnant water of this sort over a period of months.

*Bacterial Findings in Liver Abscesses. (Bakterienbefunde bei Leberabscessen.)*

CARL DAVIDSOHN. *Virchow's Archiv für pathologische Anatomie, Band 171, Heft 3.*

The author gives the results of the examination of sixteen cases of abscess of the liver, and gives a review of the literature on the subject. He comes to the conclusion that the bacteriology of liver abscesses differs according to the method by which the bacteria enter the liver. The results which he reaches are very similar to those reached by the other observers, whom he quotes, particularly those who have observed liver abscesses in temperate climates. Some of his more important conclusions are the following:

In liver abscesses having their origin from the bile passages the bacillus coli communis is found in the pus.

In liver abscesses originating through the circulation, the various forms of pyogenic cocci are found.

The common cause for colon liver abscesses is a gall-stone in one of the bile ducts.

There is not peculiar cause for the abscesses due to cocci, which may occur with any septic condition.

The fact that cultures are taken from liver abscesses after death, apparently does not make much difference in the bacteriological findings, inasmuch as the findings in his case are very similar to cases in which cultures were taken during the life of the patient.

*Researches on the Antitetanic Properties of the Nerve Centers of the Immunized Animal. (Recherches sur les "Propriétés Antitétaniques" des Centres Nerveux de L'Animal Immunisé.)*

DMITRIEVSKY. *Annales de L'Institut Pasteur, Tome XVII, No. 2.*

According to Ehrlich's side chain theory, the cells of the body possess lateral chains, possessing the specific property of drawing toxins to them, and neutralizing them. The side chains which have combined with a toxin are no longer capable of fulfilling their function, and a new formation of side chains by the cells take place. These new-formed side chains are always in excess, and the cell rids itself of the majority of them; they then enter the blood stream. These free side chains still possess the property of combining with certain toxins, and Ehrlich's theory holds that they constitute the antitoxic element. According to

this theory we must assume with regard to tetanus that the tetanus antitoxin exists in the cells of the nervous system, and that immunization appears when an excessive number of side chains are formed by these nerve cells, and are thrown into the blood. This theoretical consideration has led to a number of experiments as to the power of brain substance in neutralizing the tetanus poison. Wassermann and Takaki show that mixing tetanus toxin with brain substance renders it much less virulent, and even in some instances completely neutralizes it. The spinal cord acted in a much feebler manner. This property of neutralizing the tetanus toxin is possessed only by the solid portions of the brain, and cerebro-spinal fluid has no effect upon the toxin. Wassermann believed from these experiments that the nervous system of animals normally contained an antitoxin similar to that which is formed in the blood by the injection of tetanus toxin. Metchnikoff confirmed the work of these observers, but showed that this property of brain substance only occurred in mammals to any extent. He also showed that in immunized animals partial removal of the brain caused the blood to become much richer in antitoxin. Marie later showed that this neutralizing power of the brain only acted when the brain substance and toxin were mixed together outside of the body, or introduced into the body in very close proximity. Inoculation of an animal into the brain produced tetanus with typical symptoms.

All these facts go to show that the substance contained in the brain is probably not the ordinary antitoxin, but is some special substance which neutralizes the tetanus toxin. If the nerve centers contained an antitoxin, and this was thrown into the blood, we should be able to show that at some period the cerebral substance contained a larger amount of antitoxin than was found in the blood or the other organs, and we ought also to be able to show that the brain of immunized animals is richer than the normal brain in antitoxin at some period during the immunization.

The author endeavored to clear up these two points. He found that the brain of animals who had been immunized for only a short time did not differ at all their antitetanic power from normal brain. The brains of animals which had been immunized for long periods could neutralize a good deal larger quantity of tetanus antitoxin than normal brain. The blood of animals long immunized always contained more tetanus antitoxin than their brains.

## **MATERIA MEDICA AND THERAPEUTICS**

**Edited by Spencer L. Dawes, M. D.**

*The Treatment of Pneumonia.*

DYCE DUCKWORTH. *The British Medical Journal*, November 15, 1902.

After a brief review of the older methods of management of pneumonia, Dyce Duckworth gives a brief clinical review of the cause of the disease. The disease is a local inflammation and also a specific fever due to a toxin generated by two or three microbes. In the deadhouse, however, the morbid anatomy is practically the same whether the bacteriological finding be the pneumococcus, staphylococcus or streptococcus. The clinical observation must consequently be of greatest importance in the treatment



of the case. The early symptoms are recounted, and the first treatment should be to place the patient in bed under the rules for the management of an infectious fever, *viz.*, the care of a trained nurse, and a light diet, not forcing the nourishment against the inclination of the patient. The temperature may be disregarded unless it becomes excessive, which should be controlled by sponging with ice water, or by suspending small pieces of ice in a cradle under the bed coverings, so that a cool atmosphere may surround the patient. Leiter's tubes and ice bags may be resorted to. Antifebrin, phenacetin, or antipyrin should not be used. Five-grain doses of quinine every two, three or four hours, until the fever gives way, are preferable. Cold baths are not recommended. Cautious examinations of the lungs should be made from day to day, and a fall in temperature should be expected on the sixth or seventh day. Profuse sweating or diarrhoea at this time are means of excretion of peccant matters and should not be interfered with. The author speaks of the variations of the chlorides in the urine and goes on to say that if the fever continues after the seventh day a complicating empyema has probably supervened, and aspiration may be cautiously practiced. As to the disputed question of the use of opium it does not do to be too dogmatic. There are some cases in which it is beneficial—those cases in which the kidneys are supposed to be involved. Morphine may be given in small doses, combined with Hoffman's anodyne. This combination serves both as a stimulant and sedative. Musk is also highly commended, in larger doses than has been usually given, of from nine to twelve grains. Cyanosis from heart failure is relieved by a small bleeding of from eight to twelve ounces. With regard to the use of stimulants there is no fixed rule. When stimulants are needed they should be given. If there is engorgement of the right side of the heart, a high temperature, rapid pulse, the first sound of the heart barely audible at the aortic area (Stokes' indication) stimulants should be given. In the majority of cases two to four ounces of brandy are sufficient in the course of the day. Some patients may require twelve ounces of brandy and could not do without it. A mercurial purge may begin the treatment, and another aperient may not be needed throughout the case. The writer has no liking for a "steam-laden atmosphere." Study the temperature chart, the condition of the heart, and anticipate failure of heart power, more particularly where the venous circulation is engorged.

#### *Arsenical Idiosyncrasy.*

PHILLIPS. *The Lancet* (Lond.), July 11, 1903.

Phillips calls attention to the susceptibility of some individuals to arsenic and gives a case of his own. His patient, who had just recovered from an abortion, was given the following: "Pil. Bland, 1; extract nucis vomicæ, gr.  $\frac{1}{4}$ ; sodii arsen. anhyd., gr. 1-32," three times a day after eating. After the second capsule she complained of nausea. About five hours after the next dose she was seized with violent abdominal pains, vomiting and purging. Two hours later, when Dr. Phillips saw her, he found her "in an alarmingly collapsed condition with all the symptoms of acute irritant poisoning, evidently arsenical. In addition to the vomiting and purging, she complained of a thirst with a sense of constriction and



a burning of the throat together with acute epigastric pain and tenderness. Her features were pinched and pallid. Her skin was cold and clammy, and there was tremor of the limbs. The respiration was feeble and associated with frequent hiccoughs, and the radial pulse was quite imperceptible." Appropriate remedies were used and the patient ultimately recovered. "The interesting point in the case is that the total amount of arsenic of sodium was *less than one-tenth of a grain*, and this amount had been given in three separate doses with an interval of some hours between each dose, yet this minute quantity was sufficient to cause such alarming symptoms. There was nothing in the diet that could possibly have caused these symptoms. Moreover only twelve capsules had been prescribed, of which nine remained in the box." Phillips found later that this same patient had been attacked by similar symptoms after having taken arsenic.

### *Pyramidon.*

VALENTINI. *Deutsche medicinische Wochenschrift*, April 16, 1903.

Pyramidon has done more for Valentini's typhoid fever cases than Brandt's baths or any other treatment. He finds that it reduces the temperature to nearly if not quite normal within twenty-four hours of commencing medication and keeps it there during the entire course of the disease; in addition the pulse is reduced in frequency and there is seldom any delirium and but few mental symptoms. He gives from 0.2 gm. in the mild cases to 0.4 gm. in the severe, every two hours, night and day, until the temperature remains normal of itself. No untoward results have attended its use, even when continued for four or five weeks. He does not commence its use until the diagnosis is positive as the clinical picture is so altered by the use of the drug that a diagnosis is then impossible. He does not find that the course of the disease is shortened by its use and cautions strongly against a relaxation in the care of the patient or the attention of the nurse, because of the abatement of the symptoms which tempt not only the patient but which deceive the friends as well.

## SELECTED FORMULÆ

### CHRONIC GOUT

℞ Extr. colchici radices,  
Extr. aloë,  
Pulv. ipecachuanæ, —  
Hydrarg. chlor. mitis, aa....gr. j  
Extr. nucis vomicæ.....gr. ¼

M.—For one pill. S.—One every three or four hours until purgation ensues.  
—A. L. Loomis.

Or,

℞ Magnesii sulph.....3ij  
Potassii bicarb.....gr. xv  
Tr. colchici seminis.....℞  
Infus. buchu.....℥ ½

Ft. haustus. S.—To be taken every four or six hours, followed by a large draught of water, not too cold.

—Fothergill.

# ALBANY MEDICAL ANNALS

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## Original Communications

### VICE-PRESIDENT'S ADDRESS

*Delivered before the Medical Society of the County of Albany, October 20, 1903,*

By JOHN ARCHIBOLD, M. D.,

Cohoes, N. Y.

*Mr. President, Fellow Members of the Albany County Medical Society:*

When our worthy secretary informed me that "the feature of the evening" would be the paper of the vice-president, I accepted the duty with many misgivings. I doubted my own fitness for the task of presenting anything new or interesting to such an audience. In selecting a theme upon which I might venture without presumption to address you for a few moments, however, it occurred to me that some reminiscences of my recent experience as health officer in dealing with a somewhat protracted outbreak of smallpox in the city of Cohoes might not be inappropriate.

The literature of smallpox is voluminous, and I crave your indulgence if anything I may say shall appear dull or commonplace; and yet there is a phase of this subject, and there are conditions of the disease, with which the general practitioner has more to do than the specialist. I venture to say that it has fallen to the lot of but few of those present to be intimately associated with that disease for any considerable time, or to have had opportunity to watch the transition through successive stages, of even a mild case of varioloid. Physicians generally avail themselves of the exit which the law provides, by reporting to the health officer all cases of contagion, and, while they or their patients

shrink not from the care of other diseases, they quickly and resolutely draw the line at smallpox. In fact, the physician has but one choice, either to remain loyal to his patient, and lose, at least temporarily, a good clientage, or relinquish his case to the public health department. When, therefore, the pestilence visits a community, the health officer who is in charge during its prevalence may be assumed to have had a practical experience in the observation and treatment of the disease, not possessed by the many. When, where or how, smallpox first arose is not known; certainly no scourge has pursued the human race with such persistency or malignancy. Even at the present day, with our increased knowledge of sanitary laws and conditions, and under the wide extended immunity of vaccination, though the destructive virulence of the disease is less prevalent than formerly, still we can not speak of entire removal of the danger of its recurrence.

Previous to the outbreaks, to which I will refer presently, the city of Cohoes had not been visited with this disease to any considerable extent since the years 1879 and 1880; at that time it was epidemic, its type severe and mortality high. About a decade later it again made its appearance, but did not spread as extensively and was of a milder type, with no mortality recorded. It again disappeared to reappear again in the outbreaks to which I will refer, and as they had much in common a general review will suffice for both.

The first case of which I had any knowledge was reported to me April 1, 1901. The patient, a male adult, gave the following history of exposure: While visiting at his parents' home in Vermont one of the family became ill with well-marked symptoms of smallpox. Becoming restless under the strict conditions of the quarantine, he escaped from the house one night and came to Cohoes, where, after the usual period of incubation, he became ill of the disease, and though vaccination of the other inmates of the house, consisting of five unvaccinated and four previously vaccinated persons, ranging in age from nine years to eighty, took place immediately, it was too late to prevent the development of the disease in those who had not previously been vaccinated.

During this month the disease made its appearance in the tenement house districts, and, though it was comparatively easy in some cases to trace the source of contagion, in others it was extremely difficult. From this point it spread to various sections of the city, and for a time threatened to become epidemic. This

outbreak began April first and continued over a period of fourteen weeks; the number of cases reported was sixty.

The source of contagion in the second outbreak, which began August 1, 1902, was traced to Canada. A woman from our city had visited there and become exposed. She returned to Cohoes with the eruption plainly visible on the face. Her friends gave her a reception, ignorant, of course, of the nature of the disease. In due time others become ill, and from this source some twenty-two cases arose. Other cases came into the city from the vicinity of Newton Hook, which brought the total number of cases in this outbreak up to forty, with no fatalities to record.

At the beginning the city had no contagious disease hospital, and the cases were quarantined at their houses. This entailed enormous expense for watchers, attendance and feeding, not alone of the sick but of their families also. In May, 1901, a substantial building and ample ground were purchased and placed at the disposal of the health board. Tents were erected on the grounds. These, with the house, were furnished plainly but comfortably; the sick were placed in the hospital and those who had been exposed were quartered in the tents and given their freedom within prescribed limits.

When I had an opportunity to observe the stage of invasion, which was among those living in the tents, the symptoms usually began suddenly, with a severe chill or chilly sensation, backache referred chiefly to the lumbar or sacral region, intense headache, nausea and vomiting, and frequently muscular soreness. The temperature would rise to 102° F. or 104° F. and would remain high until the eruption made its appearance. The pulse was rapid and strong. In one case vomiting was so severe that dislocation of the jaw occurred during one of the paroxysms. In a child convulsions occurred at irregular intervals, and in the case of an epileptic the seizures were frequent and violent.

Following this condition, which lasted from forty-eight to seventy-two hours, there was a fall in temperature, in most cases to normal, and the painful symptoms became less marked or entirely disappeared. At this time the eruption began to appear on the face, wrists and hands, soon becoming general over the body. On examination of the mouth and throat, the eruption is plainly seen, if the case is one of even moderate severity, and as the disease progresses is a source of decided discomfort to the patient. At this time the disease might easily be diagnosed



measles or scarlet fever, yet the condition is so transitory one is not kept long in doubt as to its true nature.

On the fourth or fifth day of the disease the eruption becomes papular, and the characteristic "shotty" sensation is obtained as the finger passes over the skin. The papules remained in this condition for about twenty-four hours, when they again began to change to the vesicular stage, where a mistake in diagnosis might occur if the case were seen for the first time. It might easily be mistaken for chickenpox. Here, as in the macular stage, a short delay of a day or two will clear up any doubts that might arise as to its nature. From the vesicular stage the disease passes in forty-eight hours to the pustular form of the disease, and in those cases, where the eruption was profuse, the patient was indeed a pitiable sight; the face swollen and distorted, and arms and hands also very much swollen. During this stage in the severe cases there was a return of the febrile condition, not, however, as severe as in the stage of invasion. This, together with the swollen and inflamed condition of the skin and severe throat symptoms, which are aggravated at this time, made the patient's condition extremely uncomfortable. In four or five days from their appearance the pustules begin to dessicate, and desquamation soon follows. This, too, follows a somewhat regular course, beginning on the face and ending on the palmar surfaces of the hands and feet. Itching was such an annoying symptom in some of the cases that it interfered with sleep. Dating from the stage of invasion in a severe or moderately severe case of smallpox, about four weeks are required for a case to pass through the various stages. Some, however, did not require that length of time, while others required much longer.

I have already referred to the severe pharyngitis that frequently accompanies this disease. Cases of acute bronchitis were frequent, while I had one case of acute lobar pneumonia to deal with as a complication. Except during the stages of invasion and pustulation, there was no derangement of the digestive system, and the same was true of the nervous system. In the desquamative stage, boils were frequent and were a source of much discomfort. Pregnant cases, of which I had two, aborted, each after the stage of desquamation had passed, one without other symptoms than those of a normal labor, the other with well-marked symptoms of a septic condition.

In severe cases catarrhal conjunctivitis complicated, and in

the case of a young boy a severe keratitis was a sequel. During the stage of invasion the patients were confined to bed, and the usual remedies given as for any febrile condition. With the appearance of the eruption, the temperature would fall to normal, and within a week the patients were permitted to go out of doors.

In old people stimulation was required during the stage of invasion, but, generally speaking, it was not needed. During the pustular and desquamative stages ointment of zinc and salicylic acid applied freely over the body allayed the irritation and favored softening and falling off of the scabs. Baths and rubbing with coarse towels also favored desquamation. The throat symptoms were relieved with mild astringent gargles, and for wakefulness trional and sulfonal produced the desired effect. During the stage of invasion and occasionally in the pustular stage the diet was restricted to milk, broths and other mild fluids, but in the majority of cases, as soon as the eruption appeared, a general diet was permitted. In severe cases, when desquamation was complete, the skin was covered with a profusion of fine pits, which in time were barely apparent. The milder cases showed only a few ecchymotic spots over the site where the pustules had been; these soon became obliterated.

It will be observed, by what has been said, that in character the outbreaks would be termed mild. Yet a review of the mortality statistics furnished me by the State Board of Health shows that from June 1, 1901, to September 1, 1903, a period of twenty-seven months, seven hundred and thirty deaths have occurred in this State alone from this so-called mild form of smallpox. The first cases of a smallpox outbreak often pass without an early diagnosis. Whether they set in with severe or mild symptoms, it is easily possible to confuse the early stages with other febrile conditions which begin suddenly, but during the prevalence of an outbreak one is in general compelled to regard as suspicious any case which sets in acutely with high fever, especially where the patient gives a history of exposure.

A positive opinion as to whether the disease is smallpox or not should be delayed until the eruption has made its appearance, yet in modified cases, where the stage of invasion was barely noticeable, and where the eruption was confined to a few scattered pocks, it was extremely difficult to make a diagnosis.

A case which I saw in consultation will illustrate this point very clearly. The patient, a young woman had been twice successfully

vaccinated, the last time about a year before the present attack. She gave a history of having had some slight headache, backache and chilly sensations. The symptoms, however, were not severe enough to compel her to go to bed or to seek advice of the family physician. A few days later she noticed a few red spots appearing on the face, and while dressing a few were noticed on the body. Becoming curious to know what they meant, for she was not alarmed, the family physician was called, and the following day I was asked to see the case. The case was then in the papular stage, as a few papules were found on the palmar surfaces of the hands and feet. They were so few in number, however, that one would easily pass them by unless on the watch for them. A diagnosis of modified smallpox was made for the following reasons: the case being an adult, the presence of the stage of invasion slight though it was, and the eruption appearing at the usual time, and the presence of the disease in the community, were the factors from which we drew our conclusions. Another case occurring in the same family, before the quarantine was removed, convinced us that no error in diagnosis had been made.

In the management of an outbreak of smallpox in a city it is important that the authorities act in harmony with the health department. This is what took place in our city when it was threatened, and I am pleased to state they assisted me greatly by supplying everything needed in the line of a hospital, attendants and extra medical assistants to make house-to-house and factory inspections and vaccinations. By this means many cases were discovered that otherwise would have passed unnoticed and the disease made to spread beyond limit. While making an inspection of one of the factories a case was discovered in the desquamative stage of the disease, working side by side with other employés. The patient had been at home for two weeks and had returned to work that morning. In the tenement house districts it was practically impossible to get anything approaching isolation; the families are large and every inch of room is utilized. This condition is a serious drawback to the successful management of an outbreak, but where the cases can be removed, as soon as possible after the nature of the disease is known, there is little danger to be feared from contagion, providing thorough disinfection of the premises takes place, and the inhabitants of the neighborhood are vaccinated.



Of the total number of cases cared for, not more than six showed evidence of successful vaccination. From my own observation it mitigated the severity of the disease in all its phases. The patients were not nearly so ill and they desquamated much more rapidly than those who had not been vaccinated. So much for my experience with smallpox, as I had an opportunity to observe it in the city of Cohoes.

And now, Mr. President and Members of this Society, I desire at this time to thank you for the honor you have seen fit to confer upon me, and the kind attention you have given me in the performance of a duty to which I did not spring with alacrity.

Finally, on behalf of my professional associates in Cohoes and myself, I wish to extend to you a cordial invitation to hold one or more of the sessions of this society during the season which is at hand, in our city. To my mind it is not fair that Albany should have all the choice morsels of wit, wisdom and legislation, but these should be disseminated throughout the length and breadth of the county; so, come, and we will make you welcome!

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## INSANITY IN PENAL INSTITUTIONS AND ITS RELATION TO PRINCIPLES OF PENOLOGY

*Read at the National Prison Congress held at Louisville, Ky., October 3-8,  
1903*

By H. E. ALLISON, M. D.,

Medical Superintendent Matteawan State Hospital, Fishkill-on-the-Hudson, N. Y.

No institution intended to serve a good purpose can accomplish its ends and become permanently established unless the method of its government is founded upon correct principles. No progress can be made in any department of human affairs without a like foundation.

More than a hundred years ago John Howard effected great and beneficent changes not only in prisons and hospitals, but in the condition of the poor. He taught everywhere among them practical lessons of thrift and industry and drew public attention to moral and sanitary defects of prison management. He was earnestly opposed to the herding together in jails and prisons of large numbers in idleness, and advocated the treatment of men as individuals. He preached the doctrine of fresh air, good ventilation,



pure water and cleanliness. His efforts were further directed toward the introduction of useful labor as a means of establishing habits of industry, and thus, in part, effecting some degree of moral advancement. He was a man of very practical ideas, and by personal visitation and study he inquired into every aspect of prison life. Without this attention to details it is doubtful if he could have accomplished much in the way of reform. It is only through the application of his thorough methods, by the persistent exercise of the principles which should govern all penal institutions that good results may be brought about.

There is room for an improvement in the treatment of the inmates of our prisons to-day which can only be produced by an intelligent study of the convict himself. Attention should not be directed merely to the crime he has committed. The important questions to be determined before any proper disposition of the men can be made or reformation attempted, relate to the character of the prisoner himself. The whole substratum which underlies the system of our probation statutes and our parole laws concerns the individual convict. We must understand his peculiar nature before we can act intelligently. We must know his standing physically, mentally and morally. Unless we have such knowledge we cannot certify as to his fitness for conditional release. We can assign him to prison tasks, but we cannot benefit him.

Prisons should not be mere places of detention. They should lessen the prevalence of crime if possible. They should be reformatory in their influence wherever practicable. For the habitual and incorrigible offender they should offer provision for prolonged and possibly permanent custody. The officers of every prison, in order to attain any of these objects, should know intimately the personal character and the degree of mental development of every inmate.

The school of letters, manual training in the trades, and instruction in all departments demand for their best results an understanding of the capacity of the individual who is to receive their benefits.

In our public school system the most successful school is found where the teacher understands and instructs each scholar. There must, however, be material to work upon. It would be impossible for an idiot or an imbecile to pass the various grades in our public schools from the kindergarten up to graduation in the academic department. He would be weeded out long before such an event.

Our jails, prisons and reformatories would do much better work if those who are insane or idiotic, or imbecile should be culled from their custody and placed in proper receptacles or places of detention. Our laws provide that such persons have no responsibility for crime, yet many are convicted and sent to prison, the majority of whom have decided criminal tendencies and become recidivists of the most pronounced type. The duty of the medical officer should be to recognize these defectives and have them committed to institutions which can care for them permanently, or at least until they are reasonably safe to be at large, should they ever arrive at such a condition of mind and morals. Such cases have been known to repeatedly pass through the courts and to serve several terms in prison without any attention having been attracted to the convict's mental condition, or any obstacle being interposed to such frequent entrance and exit through the prison doors. Such laxity of observation is a reproach both to the courts and to the prison officials, and discredits the genuineness of any claim for reformatory work in institutions where such practices are possible.

Of two institutions equal in population it is difficult to explain why one should annually discover some percentage of its inmates to be insane and another, on the contrary, should seldom if ever find any such cases to report. The only theory that can account for such a difference is that, in the former, the officials are efficient and alert and in the other unconcerned and indifferent. Examples of such institutional methods exist. The fact that insane inmates are unrecognized in many prisons and are not given proper custody results either from a wish not to recognize them or from lack of careful observation. We should not draw a contrary inference that they do not exist there. A competent and energetic warden who desires to establish and maintain an efficient school of letters and varied industrial departments, ought necessarily to have a large insight into the personal nature of each man he has in charge. If he is interested as he should be in the welfare of the convict, as well as in the financial results of the convict's labor, he will gauge him mentally and physically. Too often the chief concern of the prison official is directed to pecuniary results and the convict who is incompetent is relegated to the idle gang or locked in his cell, or given some subordinate position where very little is required of him and where he attracts little notice from anyone. As a class the convict is not up to the standard of the average man.

He is lacking in early training, in educational advantages, in brain capacity and in his physical development. Reformatory methods may do much to develop many such persons in all the lines in which they are deficient. A certain percentage are naturally incorrigible and need custodial care, many of them presumably for life.

It is not in behalf of the ordinary prison population, however, that we desire to enlist your interest, but in behalf of those who are so markedly affected as to be actually idiots, imbeciles or insane. The disposition of these cases has been determined, very often without reference to their mental condition, by the courts. Usually the punishment inflicted has been measured from the standpoint of the crime that has been committed. Some of them have been sentenced with few preliminaries. Their history and antecedents are often unknown and little effort is made by counsel to ascertain such information. The plea of guilty is often accepted without any further inquiry and they arrive at the prison to be treated in the same way as the sane convict. Among convicted persons sentenced to prison are those who have interposed the plea of insanity, but who have been pronounced sane by the jury. In the light of their subsequent insane history the verdict of conviction is often shown to have been an erroneous one, but sentence has been imposed and the only persons capable of righting the wrong are those into whose hands they are committed for custody. These are certainly the cases the prison physician and prison officers should detect. There can be no doubt that in all penal institutions there are persons committed who were insane at the time of conviction. The prison did not make them so. Prison discipline, prison atmosphere nor prison tasks did not drive them into insanity, but it existed before they entered prison walls. It was present at the time of the criminal act and may have been the cause of such act. It is not a reflection upon the prison management that they are there, but it is a serious reflection upon that management if they are not taken out of prison. We do not mean that they should be discharged, but that they should be separated from the body of the prisoners proper. They should have some place provided for them where they may be gathered together in a body by themselves and treated by themselves. Prison efficiency requires it and humanity demands it.

There is great stress laid and rightly so upon methods for the identification of the criminal. We are all familiar with the manner



of making the "rogues' gallery." It is all of good service that we photograph the criminal, make a descriptive record of him physically, noting all scars and marks of identification so that when he is released he may be the more easily identified should he again be arrested for crime. The more exact and more scientific method, the Bertillon system, is attracting much attention and doing much good. It is said to be driving criminals out of some states into others where less careful ways of identification are employed. Recognition by means of finger prints is now becoming popular. Each of these methods is elaborate and more or less expensive but they are all for one purpose, to protect the community from subsequent depredations of the convict who has been released. In the face of this, it is surprising that so little attention is paid to the convict who is insane and whose mental condition is such that he should not be released when his term expires. If placed at liberty he is almost sure to commit crime again. He should by all means be taken from the convict body and declared to be what in fact he is—an insane convict. Some prison officers hesitate to do this because, as we have mentioned, they fear if the declaration be made that insanity exists among the inmates it might reflect upon the prison. As a matter of fact it would not, but, on the contrary, the failure to detect it and to make it known is a most unfavorable criticism upon such management.

No hospital for the insane wishes to receive felons who are undergoing sentence. The prison hospital is no place for them. This situation creates a difficulty for the warden. When the law provides that the mentally deranged convict shall be sent to a state hospital they should be sent there. The superintendent may protest but the warden's duty is clear. A vigorous enforcement of the law might lead to the establishment of some institution especially fitted for their reception and enlist the assistance of the hospital superintendent in obtaining its erection.

The general insane hospital in our opinion is not just the place for insane convicts. Neither is a wing of the prison fitted up as a hospital ward a proper receptacle. Both plans have been tried and neither proven satisfactory. These questions do not concern the warden or the prison physician, however, nor lessen the responsibility of the duty devolving upon them. All idiots, imbeciles, insane epileptics and the insane themselves should be taken out of the prisons. Most states require that they be sent to a state hospital. If so, send them there. They may create disturbance and



trouble; they may upset discipline; they may escape, but all this only emphasizes the fact that there is a class of persons who need custodial care, whose place is not in the prisons. It will call public attention to the fact that a place must be provided for them. It was just such a course of procedure that led to the establishment of the State Asylum for Insane Criminals in New York, now the Matteawan State Hospital. The Utica Asylum objected to the reception of insane convicts. They continued to be sent there in increasingly large numbers and the legislature was finally led to make separate provision for them.

The main result arising from the establishment of such an institution is the detention of these defective and degenerate persons beyond the dates of the expiration of their terms. We can all readily see that if an insane man or an imbecile with criminal tendencies commits a crime by reason of his mental condition it is useless to send him to a prison for a short term of two or three years and often less, and then release him while he still remains insane and a menace to the public. Just what proportion of convicts would be found to be insane if all cases were examined and brought to notice, is not certainly known. Widely varying estimates have been made. The average duration of insane life, however, among those committed to institutions is about twelve years, so that they tend to accumulate and to increase in numbers.

There is one phase of the question that sometimes makes it difficult for the prison physician to determine the existence of mental disease. This phase is not encountered by the general practitioner who is called upon to examine lunatics for commitment to the ordinary hospital for the insane. We allude to feigning. Excepting in trials for very serious crimes or capital offences, and in prison this feature is not of usual occurrence. Moreover, if the convict learns that he is to be transferred to a secure place of detention where little opportunity of escape offers; that he may be detained there over his time and that a penalty attends discovery of his fraudulent attempt, he will not be likely to try such a subterfuge. In the State of New York, a convict who simulates insanity is by prison rules deprived of his commutation for good behavior, and is therefore likely to lose that portion of the time he has gained by good behavior. A hospital for insane criminals therefore should be of very strong and secure construction. The ordinary asylum is not adapted for them unless a special wing or special wards are erected. Wards attached to prisons are not desirable. Where states are not large, one special

hospital should be erected which should care for the several classes of the convict, the criminal and the dangerous insane as well. It should be left discretionary with magistrates to commit either to such a special hospital or to the general asylum, persons charged with crime but found to be insane by the courts. Transfers should be permitted to the special hospital from the state hospitals of suitable cases. A congregate institution of this character has been established in the state of Michigan.

The most important result accomplished by the erection of these establishments is the culling out from the prison population of the defective classes. New York has now two institutions for the care of the criminal insane. The parent hospital at Matteawan which was opened in February, 1859, now cares for insane misdemeanor cases found to be deranged while undergoing sentence in penal custody, for all court cases and for all women of the criminal class. The new hospital at Dannemora receives and cares for all male felons becoming insane in prison. Should they still remain insane at the time of the expiration of their sentence while at the hospital, the medical superintendent gives notice of the fact to a judge of a court of record who thereupon appoints two physicians not connected with the hospital who examine into the matter. If found to be insane they are thereupon judicially committed to the hospital by order of court. The term-expired convict thereafter remains in the hospital until recovered or until reasonably safe to be at large. Convicts are detained over their terms at Matteawan also, but no judicial order is required for such detention. At Dannemora, to facilitate transfers of insane convicts from the prison to the hospital, the prison physician certifies to the warden that a convict is insane and the warden gives a written order for his transfer to the hospital, but without any order of court. The warden's order remains effective only during the term of sentence.

At Matteawan, where the sources of admission are more various, a judicial order is required in the first instance and the procedure for transfer to the hospital from prison or other penal institution, is for the prison physician to certify to the warden that in his opinion a convict is insane. The warden then refers the matter to a judge of a court of record who appoints two physicians outside of the prison, and upon their certificate the judge grants a final order committing the insane person to the custody of the hospital.

There is another feature connected with the careful examina-

tion of the individual in prison. During past years many defective persons have come into this country with the tide of immigration who were inmates of asylums, almshouses or penal institutions abroad. Numbers of them drift into our prisons. Some of them come to us from the prisons having been found to be insane, and every year several are sent from the Matteawan State Hospital to their homes in foreign countries through the assistance of their consuls or through our own State Commission in Lunacy. Our present immigration laws have been recently amended so that the limit of time during which such persons may be sent home has been much extended. The law provides that officers connected with the Federal service may be detailed to collect information of any violation of the immigration laws from the records of penal and other institutions. Arrangements are to be made whereby wardens and persons in charge of prisons, reformatories, and houses of refuge may be instructed as to the provisions of the law and invited to co-operate with the government authorities in searching out defectives and insane criminals.

Without making this an unnecessarily long paper, we would urge upon the members of this body the importance of careful examination of the mental and physical condition of all cases under their charge. Not only should this be done at the time of admission but constantly thereafter as personal acquaintance with the prisoner reveals his real nature during the term of his sentence. Furthermore, we would urge that every case of insanity when discovered should be removed from the prison and placed in proper custody. When this is done the administrative service of the prisons will thereby be improved, the convict will be classified where he properly belongs, and from the accumulation of numbers the necessity will arise of having some separate place provided for the reception, treatment and care of the insane criminal.

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## THE RELEASE OF QUARANTINE IN DIPHTHERIA.

*Read at the Meeting of the Laboratory Section of the American Public Health Association, Washington, D. C., October 26, 1903.*

By THOMAS W. SALMON, M. D.,

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Diphtheria occupies an unique place among transmissible diseases, with the diagnosis and the release of quarantine both depending upon a bacteriological test. It might be assumed that



such an accurate method of determining the passing of the period of infectiousness would lead to uniformity in quarantine regulations, but one has only to learn the methods of releasing convalescent diphtheria patients in the different cities of the United States to find that a wider divergence of views attends the termination of quarantine in diphtheria than in any other infectious disease.

Although it is generally recognized that the patient ceases to be a source of danger when diphtheria bacilli disappear from his nose and throat, the uncertainty lies in the amount of evidence considered sufficient to demonstrate this fact.

There has been a rather exceptional opportunity for obtaining exact information on this point in the epidemic of diphtheria which has prevailed at the Willard State Hospital since June, 1899. The institution receives all classes of the insane, and has a population of over 2,200 patients, who are cared for by about 500 attendants and employees. In the management of the epidemic all persons ill with diphtheria were removed, as soon as the diagnosis was made, to an isolation hospital and there detained until cultures proved them to be free from infection.

Most of the employes remain in the institution for a considerable time and the average stay of the patients is over five years, many of them spending the rest of their lives in the hospital. This has permitted us to make the period of isolation as long as we desired without hardship to any of the persons detained, and has afforded an opportunity to observe the cases closely for a long time after their discharge from the isolation hospital. Cultures were taken at frequent intervals from the onset of the disease until many months had elapsed after quarantine was released. When it is remembered that in towns, and even in institutions where the population changes rapidly, the convalescent passes from observation very soon after his release, it is seen that the conditions at this institution for the insane were peculiarly favorable for the collection of data regarding the persistence of diphtheria bacilli.

A series of one hundred cases occurring after January 1, 1901, has been taken for the purpose of examining closely the period of infectiousness and the conditions which seem to modify it. Three fatal cases have been excluded. All but five were adults, the average age being 29.1 years, and the sexes nearly equally represented. Sixty-nine of the 100 cases were healthy young people employed as nurses and attendants.



The series includes cases of greatly varying severity. Twenty-two were severe, the pseudo-membrane being extensive and the constitutional symptoms distressing. Fifty cases were moderately severe and eighteen cases were mild, the patients being confined to bed only a few days and the symptoms disappearing rapidly after the administration of antitoxin. In ten cases no pseudo-membrane existed, but fever and constitutional symptoms accompanied the presence of diphtheria bacilli in the throat.

In eighty-four cases, the pseudo-membrane was limited to the tonsils and pharynx, in five cases to the nose, and in only one case was the larynx involved.

The following table shows the number of days from the onset of the disease to the last positive culture:

Only one positive culture.....	13 cases.
1 to 5 days.....	9 "
5 to 10 days.....	6 "
10 to 15 days.....	17 "
15 to 20 days.....	16 "
20 to 25 days.....	10 "
25 to 30 days.....	6 "
30 to 35 days.....	6 "
35 to 40 days.....	5 "
40 to 45 days.....	2 "
45 to 50 days.....	3 "
50 to 55 days.....	1 "
More than 55 days.....	4 "

Before considering the cases in detail it may be interesting to notice that the severity of the disease was without influence upon the length of time the persons remained infected. The average duration of positive cultures in the severe cases was 21.86 days, in the moderately severe cases 21.4 days, and in the mild cases 22.4 days.

I have thought that it might be profitable, in considering the period of infectiousness, to apply to the one hundred cases the different methods of releasing quarantine which are in use in some cities in the United States, and to see to what extent they would have proved efficient had they been employed.

Although there are not many large cities in which the duration of quarantine is governed entirely by an arbitrary time-limit, yet in towns where bacteriological laboratories are lacking and generally in the rural districts, this is the only method for determining when the convalescent shall be released.

If all the persons in the present series of cases had been released two weeks after the onset of their illness, sixty would have been still infected with diphtheria bacilli. If three weeks had been the time-limit employed, thirty-seven persons would have been released still infected, and if four weeks, twenty-seven.

Had the absence of diphtheria bacilli in a single culture from the throat and in one taken synchronously from the nose been regarded as satisfactory evidence that the convalescents were no longer infected, fifty-four persons would have been permitted to return to their wards still infected, to spread the disease or to infect non-susceptible persons who might convey the bacilli to others. If one negative culture, taken after a time-limit of two weeks from the onset of the disease had been required, twenty-six cases would have been released still infected.

Had two negative cultures, taken on alternate days, been required, thirteen of the persons released would still have been carrying diphtheria bacilli. If the negative cultures had been obtained after the expiration of a time-limit of two weeks, only six infected persons would have been released.

At Willard three negative cultures, taken from both nose and throat on alternate days, were required for the release of quarantine, and yet in eleven instances subsequent cultures showed the persons to be still infected and they were returned to the isolation hospital. In two cases positive cultures were obtained after four satisfactory cultures had been negative, and in one instance after five negative cultures, and in another after eight negative cultures. In these cases the possibility of reinfection must be considered as they were confined with other infected persons in the somewhat crowded isolation hospital. That this was uncommonly the case is shown by the fact that the average duration of quarantine in this series of cases was about the same as in series reported by Park, Wesbrook and others.

The importance of taking cultures from both nose and throat is shown by the fact that in thirty-two pharyngeal cases, diph-

theria bacilli were found in both nose and throat, and in twelve of these they persisted in the nose after the throat had ceased to be infected.

Although there is no novelty in the statement that the first negative culture obtained may be followed by positive ones, it is important to know how frequently this occurs. Dr. Hibbert W. Hill, in his report to the Boston Health Department in 1899, stated that it happened "in nearly thirty per cent. of cases released on two successive negatives." It is possible that, in Boston, cultures were not taken for a few days after the initial positive, and this may account for the larger number of such instances at Willard where cultures were taken on alternate days from the onset of the disease until a number of weeks had elapsed.

It will doubtless be agreed that a method of releasing quarantine in which a "margin" of error of from thirty to fifty per cent. exists is not at all satisfactory and should only be employed as a step toward a more perfect method or when public opinion will admit of no other. It is scarcely preferable to a time-limit.

If, then, one negative culture is entirely unsatisfactory, what may be regarded as sufficient evidence of the final disappearance of diphtheria bacilli? From its cabalistic significance, perhaps, three has been decided upon as a maximum number of negative cultures, but at Willard only two persons less were discharged still infected after three negative cultures than when two cultures taken on alternate days had proved negative. When the two negative cultures had been obtained after a time-limit of two weeks from the onset of the disease, only six persons were subsequently found to be infected.

Short of perfection, which is unattainable even when the conditions are so entirely within the physician's control as in public institutions for the insane, this measure seems to be the one attended by the fewest disadvantages and the greatest success. It introduces the obnoxious time-limit, which is unjust, in that it causes the detention of uninfected persons, and which is inefficient, in that it permits the release of many infected persons; but yet in less than two weeks few diphtheria patients can leave their rooms in safety. If two negative cultures, taken after two weeks from the onset of the disease, had been the sole requirement for the release of quarantine in the present series of cases, forty-five

per cent. of all those who had had diphtheria would have regained their liberty in sixteen days and ninety-five per cent. of these with a certainty that they were no longer infected.

Table II shows the preceding data in condensed form, that is the number of infected persons who would have been released under various conditions.

Required for the release of quarantine.	Number of infected persons released.
Time limit of two weeks.....	60
Time limit of three weeks.....	37
Time limit of four weeks.....	27
One negative culture.....	54
Two negative cultures.....	13
Three negative cultures.....	11
One negative culture after two weeks.....	26
Two negative cultures after two weeks.....	6
Three negative cultures after two weeks.....	5
Three negative cultures after three weeks.....	2
Three negative cultures after four weeks.....	2

Several definite conclusions may be drawn from this study of one hundred cases because of the exceptional opportunity they offered for the collection of complete data.

I. The severity of the disease is shown to bear no relation to the duration of infection.

II. Additional proof is afforded of the unfairness of an arbitrary time-limit in the quarantine of diphtheria.

III. The occurrence of positive cultures after a single negative has been obtained is shown to be the rule rather than the exception.

IV. The importance of taking cultures from the nose as well as the throat for the release of pharyngeal cases is demonstrated by the number of cases in which the nose remained longer infected.

V. Two negative cultures taken on alternate days from both nose and throat after two weeks have elapsed from the onset of the disease, is suggested as a requirement which is not unfair to any and which permits the release of only six per cent. of infected persons.



## WHAT IS THE LIMIT OF SAFETY WHERE MORE THAN ONE OPERATION IS INDICATED?

*Read by Title at the Meeting of the Southern Surgical and Gynecological Association, Cincinnati, Ohio, November 11, 12 and 13, 1902*

By ALBERT VANDER VEER, M. D.,

Dean of the Faculty and Professor of Surgery, Albany Medical College.

This is surely a subject that presents itself with much force to the operating surgeon. In time of battle, when the case of the wounded soldier presents, with the right arm shot away by a portion of shell, the left hand in a somewhat similar condition, and with a Minie ball through the left lung, what can be done must be done at once and accomplished cautiously. Bleeding vessels must be controlled with great care; mangled portions of tissue and extruding portions of bone must be properly treated and the wound of the chest looked after in an intelligent manner. To be sure the chances of recovery in such a case are exceedingly doubtful, but a certain amount of surgical work must be done, although it taxes the remaining strength of the patient.

In like manner when the brave fellow has lost an arm, also a leg, but other portions of the body being in a normal condition an earnest effort is indicated to save the soldier's life. Such cases have been known to make a good recovery.

Cases of railway accident, that result in the loss of both lower extremities, not infrequently make good recoveries, but I am of the impression that this does not apply so thoroughly to the loss of both arms.

I believe this may be looked upon as worthy our respect, and that we cannot deny that the nearer we approach the heart and brain the more serious are our cases likely to be, and the greater the mortality list. It is true that at times portions of the thorax may be seriously damaged and yet, under aseptic treatment, marvelous results follow.

In realizing such conditions, and bringing to our aid modern improved methods, we can attack dangerous cases almost anywhere for relief, restoration from surgical shock being a factor to be respected and to be dealt with with the greatest energy.

But, there are cases that present to us in which we have as the surgical symptoms, the following:—In making an amputation of the limb the point of election, the point of operation, the place of

amputation that will give the best result for the patient, in the wearing of an artificial limb, and where the patient may also have present one or more hernias or tumors requiring operation.

Again I have often observed that we have this question presented to us in cases that require more than one particular operation: for instance, the woman who presents with a very encouraging case of carcinoma of the breast, in which you feel you may do a very complete and satisfactory dissection of the lymphatic glands, supra, and infra-clavicular-axillary, and otherwise, removing all the pectoralis major and minor muscles, with every prospect of her making a good recovery, if at the end of this somewhat long operation you stop and do nothing more; but, supposing this same patient has also an enlarged thyroid, cystic in character, growing somewhat rapidly, and, possibly, when considering the condition of the breast, there may be a tendency to malignancy, will you also operate upon this at the same time, or will you do this operation first, and then operate upon the breast later? These are problems not always easy of solution. If you do both operations at the same time do you not diminish very materially the chances of this patient's recovery from the actual surgical intervention?

Take the case of another patient who comes with multiple fibroids of the uterus:—There is evidence of pressure upon the ureter on one side; there are signs of pyelitis on that side; the left kidney is sensitive to the touch; the fibroid is large; it is believed that the kidney is somewhat enlarged; obstruction of the rectum also presents as the result of that portion of the fibroid being impacted in the pelvis; the patient has a lacerated cervix, not serious; there is no evidence of malignancy, yet the fibroid is growing. She has also a well defined cystic tumor in the left breast, possibly not malignant; no axillary involvement whatever, but, following out the thorough operation done upon the breast it will be necessary to remove all the lymphatic glands. Let us consider now what is the best course to pursue in this case. The patient is more concerned about the tumor of the breast than the abdominal growth. The surgeon is more concerned about the damage being done to the left kidney than the fear of malignancy connected with the tumor of the breast. In view of the laceration of the cervix will it be desirable to do a complete panhysterectomy, an operation that requires somewhat more time, even in the hands of the ablest operator, or will he do a supravaginal hysterectomy, leaving the cervix to after treatment, if necessary; will he do

either one of these operations and also attend to the breast at the same time?

I have had a personal experience with a somewhat similar case when, at the urgent solicitations of the patient, a double operation was done, removing the tumor supravaginally, and the breast and lymphatic glands at the same time, but the tax made upon her was so great that while she made a good recovery, still an impression was left that she was an exceptionally sanguine and rebounding subject for convalescence.

While these cases do not present very frequently, yet I have sometimes been very reluctant to remove both breasts at one operation, when implicated in a condition of carcinoma.

Conditions may group themselves in such a way that a multiple operation may be done without any apparent taxing of the patient's strength and vitality, but if the lesions are distributed to many distant portions of the body it is not so likely.

One can remove a uterine fibroid, operate for the relief of an umbilical hernia and empty the gall-bladder of a quantity of gall stones, and perhaps not tax the strength of the patient too much. While it is not common yet these are continued operations in a territory that you have already invaded, and possibly the individual can readily stand the additional demand made upon their strength.

I have sometimes felt that we were taxing our patient quite a good deal in doing a double herniotomy and also an operation for removal of the breast at the same time, yet patients will recover from such a procedure.

The injury to certain nerve tissues, in doing what we may call a combined operation, must not be lost sight of.

Operations that approach the stomach, operations that involve small nerve centres, are of that class greatly to be respected, when we consider the recovery of our patient, and a low mortality list.

The male patient does not bear exceedingly well a continued operation that involves the organs of generation.

To a certain extent this holds true regarding the female, but how often are we astonished by our ablest operators who begin by dilating the cervical and uterine canal, curette thoroughly, then repair a bilateral laceration, pack the uterus with gauze, then begin his operation for the relief of a cystocele, followed by relief of a rectocele and lacerated perineum. One feels that this patient has been called upon to endure about as much as the ordinary



system would be expected to tolerate, and now for a moment we are startled by the news that the abdominal cavity is to be opened, a right ovary removed, if the appendix is found diseased that also is to be removed, and then a ventral fixation of the fundus of the uterus done. If the records were really known as to the results of such successful operations, it would be of great importance to the profession to be informed of the real mortality that is brought about by so extensive and continuous operations. This I look upon as the most heroic of all surgery.

Just where would we divide the procedure necessary for relieving a patient suffering from such a number of surgical complications? Would it not be better to simply relieve the endometritis, repair the lacerated cervix, then enter the abdominal cavity, do what is necessary there, and stop, waiting for the patient to recover her full strength before attending to the cystocele, rectocele and lacerated perineum? Not infrequently these patients have in addition some rectal complication, fissures, hemorrhoids, rectal polypi or some such lesion that needs attention. Just where will we make the division before we begin operating?

A patient not infrequently may suffer from such a complication and is there no settled, fixed surgical law for our conduct in such a case? Text-books are not altogether clear upon the subject, although some are much better than others.

It may be said that every surgeon is a law unto himself as to the success of his practice, and when doing multiple operations.

One surgeon is much more dextrous than another, and his operations are not so exhausting to the patient. Then, again, he may have a method of operating in such a manner that it is no great tax upon his patient. Such experiences should be presented to the profession that younger men may profit thereby.

Take for instance a case in which it becomes necessary to remove one kidney. Will we also in this case operate for an umbilical hernia that is presenting very seriously? Perhaps strangulation may demand such a procedure. Will this lessen our patient's chances of recovery, who may perhaps demand all this necessary surgical intervention, when under ether?

I would say in such cases operate only when the hernia is in danger of strangulation. I am led to say that when operating in cases of strangulated hernias, do that and nothing more, the exceptions being exceedingly few. This form of surgical lesion, as we all know, exhausts the nervous force of the patient very pro-



foundly; therefore, we should be very cautious in adding to it. The same remarks hold good in operations upon the stomach.

As we have all observed, the mere handling or prolonged examination of the latter organ often causes severe shock.

In the operation of nephrectomy, I do not like to do more than that one operation upon any one patient, at any one time. This I think holds good in operating upon the lung or opening the pleural cavity.

Operations upon the brain is quite enough at any one time.

In fact, in this very brief paper, I am desirous of stating that I believe extreme multiple operations, deliberately planned, should not be encouraged, although our surgical technique of to-day allows us to do more than was ever dreamed of in the near past.

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### Editorial

He had an odd way of disparaging his patient's ailment. The sufferer might be pretty sick, yet in the old doctor's dictum was only "somewhat uncomfortable." "Rather unwell" marked the next lower stage, plain "sick" the next, which finally evolved into "pretty sick," if the patient drew near the shadows. This was to neighbors. To the family he never failed to tell the truth as the hour of dissolution drew nigh.

CLARENCE DEMING.

*An Old-time Country Doctor.*

**Saline** Among the recent therapeutic measures of real  
**Infusion in** value, the operation of saline infusion takes a lead-  
**Typhoid** ing place. As a substitute for the transfusion of  
**Fever.** blood, the principles concerned were made available for ordinary use and their scope largely extended. As is true of a great many procedures saline injections reached the profession first through surgery, and now have found their way extensively into medical practice with a success which promises still further uses. The indications are, primarily, shock from loss of blood, and, secondarily, shock and exhaustion from any depleted state of the organism. Medically, thus, the infusion of normal salt solution may be indicated in toxic states, which may be either active or passive, incident to some intrinsic poisoning, as auto-intoxication. In uraemic coma, for instance, the introduction of a pure diluent of the vitiated blood, has been found to mitigate the condition, and here and in analogous states the experiment of this treatment, which is perfectly safe, under proper aseptic management, may be pushed to more common use.

In *The Lancet* of October 24, 1903, D. G. Marshall reports a severe case of typhoid fever in which saline infusion was used to advantage to combat several critical periods. The patient's life appears to have been saved by this treatment. In the third week of the disease the patient's condition was serious. There was a severe rigor; the temperature was 105 degrees; the heart sounds were very weak and the pulse was almost imperceptible at the wrist. The ordinary cardiac stimulants failed, and twenty ounces of normal salt solution were injected into the areolar tissue round the right breast. This was followed by improvement in the pulse and the patient became restful. On the next day the rigor and decline of pulse were again noted, and the repetition of the hypodermoclysis was followed by five days of comfort. There then ensued a profuse hemorrhage from the bowel, followed by profound collapse, with a pulse rate of 140. Twenty-five ounces were again injected, with benefit, the temperature touching the normal point daily for two weeks. There was then a relapse, followed in ten days by rigor, pulse rate of 160 and temperature of 106.2 degrees. Thirty ounces of fluid were injected. On the two succeeding days the stools were tinged with blood, and for a week the condition of the patient was critical, with delirium and a soft, dicrotic pulse ranging from 130 to 160. Improvement was gradual, interrupted by another relapse, after which recovery took place. The general treatment throughout was fresh chlorine water and other intestinal antiseptics, sulphuric acid and opium to restrain the diarrhoea, and when hemorrhage occurred chloride of calcium in twenty grain doses.

## Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—CITY OF ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, OCTOBER, 1903.

### Deaths

	1901	1902	1903
Typhoid Fever .....	0	4	3
Scarlet Fever .....	0	0	1
Measles .....	0	0	5
Erysipelas .....	1	0	0
Whooping-cough .....	0	2	0

	1901	1902	1903
Diphtheria and Croup .....	6	4	2
Grippe .....	0	0	0
Consumption .....	22	26	18
Pneumonia .....	8	9	7
Bright's Disease .....	8	9	12
Apoplexy .....	11	10	14
Cancer .....	8	8	7
Accidents and Violence .....	13	7	8

*Deaths in Institutions*

Albany City Hospital .....	13	13	20
Albany Orphan Asylum .....	1	3	3
Child's Hospital .....	1	0	0
County House .....	4	4	3
Home for Friendless .....	0	0	3
Home for Aged Men .....	1	0	0
Homeopathic Hospital .....	1	2	0
Hospital for Incurables .....	0	1	0
House of Shelter .....	0	1	0
Little Sisters of the Poor.....	3	2	0
Public Places .....	0	3	2
Sacred Heart Convent .....	1	0	1
St. Margaret's House .....	5	0	2
St. Peter's Hospital .....	7	3	1

Total number of deaths.....	126	136	137
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Death rate .....	14.38	16.01	16.12
Death rate this year, less non-residents.....			13.18
Marriages .....			68

Births at term .....	135
Still births .....	6
Premature births .....	2

Total .....	143
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The freedom of the city from deaths from the ordinary contagious diseases is remarkable, and gratifying, for a city the size of Albany. Only one death in October from scarlet fever, two from diphtheria and three from typhoid fever is certainly an evidence of effective quarantine and general excellent sanitary conditions, throughout the city. There is noticed from month to month, also, a gradual decrease in the number of those who die from consumption: eighteen this year as against twenty-six the year before and twenty-two during the corresponding month of the year 1901. The same relative decrease is noticed in other months.

Some effective means should be taken to make public the normal and correct death rate of our city. So many die in our local hospitals who come to them from neighboring places that the death rate of the city

is made abnormally high. With all the deaths taken into consideration, the death rate is 16.12 which shows a thoroughly healthful condition, but the non-resident death rate is but 13.18, and compares most favorably with the death rate of other cities of the same class.

The total birth return of 143 as against 137 deaths is most satisfactory.

#### WORK OF HEALTH PHYSICIANS

Total number of assignments made to health physicians....	54
Total number of calls made.....	190
Total number of vaccinations.....	4

#### INSPECTIONS

In the Bureau of Markets and Milk, forty inspections were made, of which four were of slaughter houses, two of rendering establishments, four of hide houses, ten of markets and twenty of milk wagons.

In the Bureau of Sanitation thirty-eight complaints were made of which two were of privies, five of closets, six of drains, ten of plumbing, five of water, five of filthy premises, two of chicken, two of garbage, and one of odors. Forty-seven inspections were made and twenty re-inspections. Twelve complaints were found to have been made without cause, seven nuisances were found on re-inspection to have been abated and four cleaned, eighteen notices were served and four cases were referred to the Commissioner of Public Safety.

In the Bureau of Plumbing, seventy-four inspections were made: fifty-nine of old buildings and fifteen of new buildings. Inspections were made of twenty iron drains, fourteen connections with street sewers, eighteen tile drains, seven cesspools, twenty wash basins, eighteen sinks, nineteen bath tubs, eight wash trays, and thirty tank closets. One hundred and fifteen permits were issued of which ninety-one were for plumbing, and twenty-four for building purposes. Two plans for new buildings were submitted for approval, seven houses were tested on complaint, four water tests were made, twenty-two houses were examined on complaint and nine re-examined.

The work of systematizing the inspection of the milk supply and markets, and the slaughtering and rendering establishments in proceeding satisfactorily. One milk dealer with a low percentage of cream in his milk has been detected and steps taken to procure a better grade of milk.

#### MANUFACTURING ESTABLISHMENTS

The department is gradually collecting the names of all manufacturing establishments and other lines of business which come under the new law for manufacturing establishments. Some of the manufacturing establishments are already on file for re-inspection and others are being daily added. It was not thought wise to enforce the law vigorously at first on account of the inconvenience which the readjustment of conditions would cause.



## CONTAGIOUS DISEASES

*Cases Reported*

	1901	1902	1903
Typhoid Fever .....	11	13	3
Scarlet Fever .....	3	7	5
Diphtheria and Croup .....	89	59	24
Chickenpox .....	4	8	3
Measles .....	3	0	4
Whooping-cough .....	0	0	0
Consumption .....	0	0	0
Total .....	110	87	39

## Fumigations:

Houses.....	31	Rooms.....	72
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## Number of days quarantine for diphtheria:

Longest.....	31	Shortest.....	3	Average.....	18+
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## Number of days quarantine for scarlet fever:

Longest.....	40	Shortest.....	14	Average.....	29 3-5
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## ANTITOXIN

Total number of cases of diphtheria reported.....	24
Cases in which antitoxin was used.....	19
Cases in which antitoxin was not used.....	5
Deaths after use of antitoxin.....	1

The one death from diphtheria was a female, age fifty years, sick two or three days, antitoxin was used on third day, complicated with consumption and paralysis.

The contagious disease record of the city is also most satisfactory.

## BUREAU OF PATHOLOGY

*Bender Laboratory Report—Cultures for Diphtheria*

Initial positive	Initial negative	Release positive	Release negative
21	19	9	20
Total.....		69	

*Tests for Tuberculosis*

Initial positive	Initial negative
1	1
Total.....	2

## Society Proceedings

### MEDICAL SOCIETY OF THE COUNTY OF ALBANY

A regular meeting of the Society was held in Alumni Hall on Wednesday evening, November 11, 1903. The meeting was called to order at 8:50 P. M., by the President, Dr. C. S. Merrill.

The following members were present: Drs. Barker, Bendell, Bingham, Blair, Cook, Classen, Craig, Dawes, Elting, Goewey, George, W. H., Hacker, Hennessey, Hun, Lewi, Laird, Lomax, MacFarlane, Merrill, Moore, C. H., Mosher, Neuman, Pearce, Pease, Ryan, Shaw, Sweet, E., Sweet, M., Traver, Ward, Wiltse, Vander Veer, A., and several guests.

1. *Reading of minutes of last regular meeting.* Dr. Ward moved that the minutes as printed in the November ANNALS be accepted. The motion was seconded and carried.

2. *Reading of minutes of special meetings.* No special meetings had been held.

3. *Applications for membership.* No names were presented.

4. *Reception of reports and resolutions.* None were offered.

5. *Reading of papers.*

Dr. ARTHUR W. ELTING read a paper on "Pathology and Treatment of Tetanus with Report of Three Cases." At the close of Dr. Elting's paper cases were reported by Drs. Barker, Hennessey, Tedford and Travell.

Dr. BARKER reported the following cases:

*Case 1.* C. B., a boy ten years of age. While playing on the street June 21, 1887, he was struck by a horse and wagon and received a severe scalp wound. The wounds healed kindly but three days after the injury a stiffness of the muscles of the neck was noticed which gradually improved. On July 6th, fifteen days after the injury, there were marked symptoms of tetanus. There was well marked risus sardonicus, the muscles of the jaws were hard and rigid and teeth firmly clenched. Nourishment was administered through a quill inserted back of the molar teeth and bromide and chloral given in large doses. On July 8th the first spasm occurred. During the spasm there was a marked rigidity of the muscles with opisthotonos. He had two more spasms on that day. Chloral was administered in large doses. There were three spasms on the ninth, three on the tenth, and the most severe of all occurred on the eleventh when he had five protracted ones. There were no spasms on the twelfth, but on the thirteenth there were two slight spasms. On the fourteenth one severe one and two slight ones. The spasms became less severe and fewer in number so that he was able to use his jaw and take some solid food. After the 25th of July there was no twitching or jerking of the muscles or further nervous symptoms so the use of chloral and bromides was discontinued. It was six weeks after this, however, before the rigidity of the muscles of neck, back and abdomen had entirely disappeared.

*Case 2.* Was that of a boy who had stepped on a nail. Two weeks later rigidity of the jaw was first observed. The wound had entirely healed. When seen the temperature was 104° with rapid, feeble pulse. The muscles were in a condition of tonic spasm. A hypodermic of morphine was

## SOCIETY PROCEEDINGS

given and a large dose of chloral and bromide. This produced some relief and the rigidity of the muscles diminished. The chloral was continued and the boy made a complete recovery.

*Case 3.* A child six years of age was seen a year ago last July. Three weeks before the child had been vaccinated and no aseptic precautions had been taken. The vaccination wound was dirty and inflamed. When first seen the child was in a condition of tonic spasms with rigid jaws. Chloroform relieved the spasms. Ten cubic centimetres of tetanus antitoxin were given and there seemed to be a slight amelioration of the symptoms. More antitoxin was administered two hours later with no effect and six hours later the child died.

Dr. HENNESSEY's case in brief was as follows:

Mrs. M. M., age forty. On the 28th of August she stepped on a rusty nail penetrating the heel of the foot. The wound healed and the soreness passed away in a couple of days. Eight days later (September 5th), the pain returned in the foot and she also complained of severe pain about the heart. On the next day there was a stiffness of the neck and marked difficulty in swallowing. On September 7th she began to have contractions of muscles of inflicted foot, back, abdomen and jaws. She was brought to St. Peter's Hospital on September 10th with marked retraction of head, rigidity of muscles of back, opisthotonos, and a tonic contraction of the muscles of the infected foot resembling a talipes. The teeth could only be separated about one-third of an inch. She suffered greatly from paroxysmal tonic contractions about every fifteen minutes. Fifty cubic centimetres of anti-tetanus serum were injected subcutaneously on admission with little effect on paroxysms or pain. Nine hours later fifty cubic centimetres were introduced intraspinally with the effect of reducing the paroxysms and pain. On the next two days two subcutaneous injections were given daily. From one to three-quarters of a grain of morphine were given each day. Another intraspinal injection was given with good effect. Daily subcutaneous injections of fifty cubic centimetres of serum were given for eighteen days. During the height of the disease the temperature ranged from 100° to 103° and the pulse from ninety to 120.

Seven Fourth of July wounds from toy pistols were dressed and treated in the dispensary of St. Peter's Hospital. In all these cases an immunizing dose of ten cubic centimetres of anti-tetanus serum was injected into the buttock and no case of tetanus developed.

Dr. TEDFORD's case was as follows:

J. Z., male, age fourteen. Patient shot himself in palm of right hand July 4, 1903. Wound was dressed by a physician within a short time. Patient presented himself for treatment July 7th. Examination disclosed a punctured wound about one centimetre in depth. Exploration revealed a portion of wad still in the wound which was curretted and thoroughly disinfected. On Thursday July 9 he complained of stiffness of the jaws which gradually increased in severity until the seventeenth of July when he was attacked by convulsions. Antitoxin was now used, fifty cubic centimetres being administered twice daily until July 27 and once daily until August 5. The mind was clear and deglutition was accomplished with difficulty. Patient complained of pain in the abdomen and also in the

region of the diaphragm. Opisthotonos was exceedingly troublesome at times. The jaws were tightly set and the muscles of the back and neck and abdomen were rigid. Under the antitoxin treatment the patient gradually improved and was discharged cured August 17, 1903.

Dr. TRAVELL reported the following case:

D. A., Italian laborer, twenty-seven years old. He stepped on a tack when walking barefoot about the end of May. On June 3rd, 1903, the patient felt stiffness and pain in the muscles of the face. Dr. Travell first saw the patient on June 8th. The masseters were rigid and contracted, the muscles of arms and legs in a tonic spasm and the body in a state of marked opisthotonos. The patient was in great pain and had not been able to sleep. He was taken to the Troy Hospital and fifty cubic centimetres of antitoxin were injected subcutaneously. This was repeated four hours later. The next day fifty cubic centimetres of serum were injected into the spinal canal with a marked abatement of the symptoms. The patient was having about six spasms each day. In the evening fifty cubic centimetres were injected subcutaneously. The next day seventy cubic centimetres were injected subcutaneously and thirty cubic centimetres in the subdural space. At this time the history of the puncture of the foot was obtained and the area opened up and curretted.

On June 11, the rigidity had become much less. Fifty cubic centimetres of serum were injected. This was the last injection and the patient gradually improved and was discharged from the hospital on June 30th. In this case there were five subcutaneous and two subdural injections. The total amount of serum used was 350 cubic centimetres.

Dr. PEASE followed with a General Summary of the Subject—and an Analysis of Forty-Five Additional Cases.

At the close of Dr. Pease's paper the President opened the meeting for discussion.

Dr. VANDER VEER regretted not having heard Dr. Elting's paper, but had seen the cases he reported at the Albany Hospital. In looking over the records for the last forty years he had seen a great variety of treatments. The treatment by opiates had been sometimes successful in the Civil War as also in private practice. Chloral and bromide of potassium were used, but he did not recall a single cure effected by this method. He remembered when the use of a serum was first recommended and in talks with Dr. Barker regarding the treatment of tetanus, his view was that serum would finally be universally and successfully used. He had used it and found that when called on consultation, the use of the serum had been resorted to too late. He emphasised the prophylactic use of the serum and said it had been so used at the Albany Hospital in doses up to ten cubic centimetres with no untoward results. He believed Dr. Elting's courage in giving large doses was a move in the right direction and he hoped that during the coming year more would be done in regard to the prophylactic use of antitoxin to prevent the great mortality.

Dr. CLASSEN had a case five years ago on September 27th, 1898. Geo. C., aged seven. Struck by a motor car which caused an incised wound in the forehead. This wound was filled with dust. After cleansing it was closed with three sutures and appeared to be healing. On the fol-



lowing Wednesday, October 5th, he was called because of a stiffness in the boy's neck. The next day the neck was rigid and there were spasms. Antitoxin was administered three times that day, but the spasms increased and the boy died on October 10th. He thought there had not been enough antitoxin used.

Dr. NEUMAN said the first case he saw was one Dr. Ward sent him to examine when he was a student in 1888. The case was one of a strong young man who had a wound on his hand. He had spasms followed by convulsions which occurred at first at intervals of half an hour. Although chloral and bromide were used, it was only under general anæsthesia that relaxation could be produced and the case went on to death which came seven days after the injury and five days after the convulsions commenced. Following this he did some work in New York on the organism of tetanus. During his term in the Albany Hospital he met three interesting cases. He tried the use of eserine (calabar bean), the idea being to overcome convulsive attacks. In the acute type it seemed to alleviate the symptoms, but convulsions continued and death ensued. The other two cases recovered as a result of the administration of large doses of eserine, but not large enough to contract the pupils. The doses were one grain every hour for three doses.

Five years ago he saw a case in consultation. Antitoxin had been used but the case got worse. He suggested eserine in doses not quite large enough to cause contraction of the pupils. The boy had become weak, was cyanosed and there was marked opisthotonos. The case finally recovered.

He suggested the use of some drug, as eserine, in conjunction with antitoxin and advises its use in large doses, yet which will not contract the pupils.

Dr. PEASE said that in regard to the period of incubation, the longer the period, the more severe the attack. A period of three or four days' incubation would result, usually, in a mild case. He would class the first case mentioned in Dr. Elting's paper as sub-acute as indicated by the spasms occurring every few hours. The treatment of the case was excellent.

As regards the question of a standard test for describing the strength of antitoxin, the reason that the manufacturers do not use it in this country is because they have "not got into the way of it." The word "unit" had no meaning in connection with the tetanus antitoxin because the Germans had one test and the French another. The Germans have a good test, but they do not care to have it published. He said he was working with another producer in this country and he hoped to have a test, but various points will have to be worked out before a test for general use can be found. The task is no easy one and the work is still in its experimental stage.

The meeting, on motion, then adjourned.

HENRY L. K. SHAW, *Secretary.*

CYRUS S. MERRILL, *President.*

## Medical News

Edited by Eugene E. Hinman, M. D.

**THE ALBANY GUILD FOR THE CARE OF THE SICK POOR.**—STATISTICS FOR OCTOBER, 1903. Number of new cases, sixty-six. *Classification of cases:* Dispensary cases receiving home care, two; district cases reported by city physician, three; charity cases reported by other physicians, thirty-four; total number of charity cases, thirty-nine. Patients of limited means, twenty-seven; old cases still under treatment, twenty-seven; total number of patients under nursing care, ninety-three. *Classification of diseases, (new cases):* medical, seventeen; surgical, eight; gynaecological, seven; obstetrical, twenty-one mothers and fifteen infants under professional care. One contagious disease in medical list. Transferred to hospital, one; deaths, two.

*Special Obstetrical Department:* Three obstetricians in charge of cases. Medical students in attendance, four; Guild nurses in attendance, six; number of patients, five. Number of visits by consulting obstetricians, ten; by attending obstetrician, ten; by medical students, forty-two; by Guild nurses, fifty-eight; total number of visits for this department, 120.

*Visits of Guild Nurses (all departments):* Number of visits with nursing treatment, 798; for professional supervision of convalescents, 122; total number of visits, 920. Cases were reported to the Guild by the city physician, by four health physicians and by nineteen other physicians.

**ALBANY MEDICAL COLLEGE: NEW ENGLAND ALUMNI ASSOCIATION.**—The annual meeting of the Association was held at the Hotel Winthrop, Springfield, Mass., on Tuesday evening, November 24th, 1903.

**ALBANY HOSPITAL TRAINING SCHOOL.**—The annual meeting of the patronesses of the Albany Hospital and the Training School was held recently in the hospital and the annual reports of the officers were presented. The report of the treasurer shows a balance of \$815.57 in the treasury. The report of Miss MacDonald, superintendent of nurses shows that the nursing staff consists of: Head nurses, seven; instructor of dietetics, one; pupils, fifty-six; probationers, eight, giving a total of seventy-two. During the year the pupils in the hospital have done 1784 days paid special nursing and 578 days free special nursing, a decrease in the paid and an increase in the free nursing over the previous year. The Hospital Aid Society reported, through Mrs. Sard, that many small contributions were obtained for the work of the hospital from a large number of sources, thus encouraging the interest of a large number of people. After adopting a revised constitution the board elected the following officers for the ensuing year: Mrs. William L. Learned, president; Mrs. Frederick Townsend, vice-president; Mrs. James McCredie, secretary; Mrs. Simon W. Rosendale, treasurer.

**ALBANY HOSPITAL FOR INCURABLES.**—The Board of Trustees of this institution have issued an appeal for contributions in behalf of this worthy cause.

In its new home on Kenwood Heights much has been done to make the life of the unfortunate sufferers who are its inmates as comfortable as possible and any assistance will be most gladly received by any of the officers of the institution or contributions may be sent to the treasurer, Mr. C. F. Dearstyne, No. 402 Broadway.

**SURGEON-GENERAL'S REPORT.**—The annual report of Surgeon-General Rixey of the navy says that dissatisfaction has existed for some time among the members of the medical corps in regard to the titles which are given them in the various grades. He makes a number of suggestions as to changes which would make these titles suggestive of the naval service. Continuing, the report says that the past year furnished many instances in which the need of hospital ships has been demonstrated. Recommendations for additional naval hospitals are also made, among them one at Puget Sound. He urges the construction of two hospital ships, to cost \$1,630,000 each. Attention is called to the need of a naval sanitarium for the treatment of tuberculosis.

**CIVIL SERVICE MEDICAL EXAMINATIONS.**—The State Civil Service Commission will hold open competitive examinations for the positions of superintendent and resident physician in the New York State Hospital for the Treatment of Incipient Pulmonary Tuberculosis, November 28th, 1903 in the various cities throughout the state. Intending competitors must fill out application blanks and file them in the office of the commission before noon of November 23rd. The former position will probably pay about \$3,500 per year and the latter from \$900 to \$1,500. For further information address the chief examiner, State Civil Service Commission, Albany, N. Y.

**THE ENO SANDER PRIZE.**—This prize has been offered by the Association of Military Surgeons of the United States for the best essay on "The relation of the medical department of the health of armies." The contest is open to all who are eligible for membership in this association and will be awarded as follows: The essayist securing first place will receive a gold medal of the value of \$100. The essayist securing second place will receive a life membership in the association, of the value of \$50. All essays must contain not less than ten thousand or more than twelve thousand words, exclusive of tables. For further information address James E. Pilcher, secretary, Carlisle, Penn.

**WARREN TRIENNIAL PRIZE.**—This prize is awarded every three years to the best dissertation on some subject in physiology, surgery or pathological anatomy, the arbitrators being the physicians and surgeons of the Massachusetts General Hospital. The subject for the competition this year is on "Some special subject in physiology, surgery or pathology." The amount of the prize is \$500 in gold. Dissertations must be received not later than April 14th, 1904. For further information address Dr. Herbert B. Howard, resident physician, Massachusetts General Hospital, Boston, Mass.

**AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.**—The sixtieth annual meeting of this association will be held in St. Louis, Mo., from Monday,



May 30th, 1904, to Friday, June 3rd, 1904, inclusive. Sessions will be held in the mornings only and the secretary will be glad to receive early notification of any papers to be read.

**AMERICAN PUBLIC HEALTH ASSOCIATION.**—At the recent meeting of the American Public Health Association held at Washington the committee on vital statistics reported that effective co-operation had been instituted between that association, the conference of State boards of health, the American Medical Association, the United States census bureau and the United States public health and Marine-hospital service for the improvement of the vital statistics of this country. Among the objects sought are the extension of adequate methods of registration, the use of uniform and comparable tables and rates in bulletins and reports, and the improvement of the international classification of causes of death. A pamphlet on "Statistical Treatment of Cases of Death" has been issued by the United States census bureau, requests for which should be addressed to Mr. W. A. King, chief statistician for vital statistics, census bureau. It has special reference to the difficulties encountered in compiling deaths returned from several causes, and asks for the co-operation of the profession in framing a thoroughly satisfactory method of procedure in such cases.

**A PLAGUE CONGRESS.**—An International Sanitary Congress for the adoption of means of defense against cholera and the plague opened in Paris on October 10. Representatives of twenty-five powers were present, including Surgeon Anderson, United States navy, medical inspector of the United States European station; Colonel Gorgas, formerly chief sanitary officer of the United States at Havana, and Dr. Giddings, representing the United States. Foreign Minister Delcasse, in the opening address, pointed out the necessity for international co-operation in resisting the spread of epidemics.

**INJURIOUS EFFECTS OF RAPID MOTOR LOCOMOTION.**—At the last meeting of the Societe D'Hypnologie et de Physiologie, in Paris, M. Hachet Souplet spoke of the effects of the use of the modern motor machines. He claims that the mental and moral condition of the driver becomes abnormal, he grows vindictive, furiously aggressive and lets himself be carried away with the angry impulse of the moment. The high rate of speed works him up into the very same state of mind which makes the habitual drinker of alcohol regardless of consequences.

**THE CANADIAN MEDICAL ASSOCIATION.**—Dr. A. L. Benedict, of Buffalo, N. Y., who was a delegate from the Medical Society of the State of New York to the Canadian Medical Association, gives (in the *Medical Times* of October) a very interesting account of the thirty-sixth annual meeting of that association which was held in London, Ont., Aug. 25-28, 1903. The Canadian association is still small in numbers and conducts its meetings under two divisions, medical and surgical. Thus the complexity of a multiplicity of sections is avoided and closer attention may be paid to each paper and discussion. Medical education in the United States is without doubt considerably ahead of that in Canada but judging from the character of the reception of the American guests at the meetings of the Canadian Association we are fully equalled by them in hospitality.



**SALT AS A FACTOR IN CANCER.**—*The Medical Times* calls attention, in its issue of October, 1903, to the claims of Braithwalk, of London, who advances the theory that excessive salt in the diet is one of four factors which originate cancer.

Dr. Braithwalk is the gynecologist of the Leeds' General Infirmary and this line of thought originated from the fact that cancer was seldom met among the large number of Jewesses attending the gynecological department of that institution. Dr. Turnstall, medical officer to the Jewish Hospital for Incurables, says he has never seen a case of cancer among Jewish patients. The difference in diet between Hebrews and Gentiles consists mainly in the absence of bacon and ham from the Hebrew diet, and as the pig is the only domestic animal in which no case of cancer has been found, it must be the salt, not the flesh, of the animal which is to blame. The Hebrews also eat less butchers' meat and more fowl and fish.

Savages, so far as is known, are exempt from cancer, and they get no salt. All the domestic animals except the pig are subject to cancer and salt is given to sheep, cows, and horses, but never to pigs. The wild carnivora, with of course a pure meat diet, are exempt. On the other hand, when confined in zoological gardens they are given salt and become subject to cancer. An African hippopotamus recently died from cancer in the zoological gardens in London, but salt had been given to it with its daily food. Wherever there is an extensive cancer field or a district in which the inhabitants seem to be especially prone to the disease it will be found that the people have an excessive meat diet, largely consisting of ham and bacon. This Dr. Braithwalk noticed in the notorious Matton-Pickney district as well as in Wetherby. One common factor he found in these places—that the farming class eat meat or bacon two or three times a day. The poorer class who eat less meat and accordingly less salt, are comparatively exempt from the disease in these districts.

Thus far the doctor's investigation only points to the probable cause of the disease and its prevention; but for its actual cure after it has invaded the system, while keeping constantly in view the factors which are most instrumental in producing it, avoiding them as far as possible, we must look to some remedy of which he gives no hint, to destroy the germ scattered through the system. The theory, therefore, advanced by Dr. Braithwalk points more to prevention than to cure, and, of course, if proved to be correct, in the line of prevention of disease to which the attention of the profession is now so strongly directed, will be of great benefit.

**YELLOW FEVER EPIDEMIC IN TEXAS.**—The prevalence of yellow fever in several parts of the State of Texas has been and is still causing the health authorities of that state much anxiety and the United States authorities have maintained rigid supervision over the quarantine measures. In the neighborhood of Houston, Missouri City, Clodine, Katy, Spring and Humble, all important railroad points through which pass lines carrying passengers from infected points, detention camps are maintained and rigid inspection of all trains is maintained.

**GERMICIDAL ACTION OF ALUM ON THE TYPHOID BACILLUS.**—In a paper read before the Liverpool Congress, 1903, of the Royal Institute of Public Health, Mr. H. S. Wilson, demonstrator of bacteriology in King's College, London, dealt very carefully with the question of the value of alum as a germicide. This salt is a double sulphate of Al and K (or Am), and it has a markedly acid reaction. Its germicidal action, however, in drinking water is practically never that of the double sulphate. The feeble alkalinity of the water causes a precipitation of the salt, the precipitate consisting mainly of the semi-gelatinous hydrate of aluminum. An emulsion of active typhoid bacilli in sterile, distilled water, to which was added one per cent. of alum, showed that all of the bacilli were not destroyed until between four and five days. In ordinary drinking water or river water the precipitated aluminum hydrate has remarkable purifying properties, both due to a mechanical entanglement of the water organisms and also to its destructive effect upon many of these organisms. Tests show a remarkable diminution of bacterial life after the addition of alum to such water. On the contrary careful plate cultures from water infected with typhoid bacillus to which had been added alum in the strength of ten grains to the gallon showed typhoid colonies in great numbers and in almost pure culture, even after the lapse of six days. The conclusion is therefore that although alum is a valuable agent for purifying water, and for getting rid of the ordinary water organisms, it is of no value as an agent for the destruction of typhoid bacillus.

**PERSONAL.**—Dr. JAMES R. NEWTON (A. M. C. '82), has removed to 112 Wyoming avenue, Scranton, Pa.

Dr. RUSSELL CLUTE (A. M. C. '03), has been appointed medical interne at the Manhattan State Hospital at a salary of \$50 per month.

Dr. FREDERICK A. SMART (A. M. C. '99), has moved from Nassau, N. Y., to Cobleskill, N. Y.

Dr. THOMAS W. SALMON (A. M. C. '99), formerly bacteriologist to New York State Hospitals, has resigned that position to enter the U. S. Public Health and Marine Hospital Service, ranking as assistant surgeon, with headquarters at the department office in Philadelphia, Pa.

Dr. GEORGE L. STREETER, formerly of this city, is now at the Johns Hopkins Medical School.

**MARRIED.**—GUTMAN-BENJAMIN.—Dr. John H. Gutmann (A. M. C. '02), and Miss Winifred Benjamin, of Pittsfield, Mass., were married on November 18, 1903, at the home of the bride.

## In Memoriam

LORENZO TRAVER, M. D.

Dr. Lorenzo Traver died at his home in Providence, R. I., on October 24th, 1903, after an illness of five weeks. Dr. Traver was born at Nassau, Rensselaer county, N. Y., Oct. 7, 1834. He was educated in the public schools and began the study of medicine at Glens Falls in 1854. He attended courses of medical lectures at the Vermont Academy of Medicine and at the Albany Medical College, being graduated from the latter institution in 1857. He then went to New Bedford, Mass., where he practiced his profession up to the time of the outbreak of the Civil War, when he enlisted in the navy as acting assistant surgeon on board the U. S. S. Delaware. On this vessel he participated in numerous actions, acquitting himself creditably throughout. In 1863 he was ordered to the U. S. S. Proteus, and after a term of service on that craft he was ordered to the South Carolina and later to the Tallapoosa. At the close of the war he remained in the service up to 1868, during the greater part of this time being on duty throughout the south. Dr. Traver's war record was a remarkably fine one, his term of service covering nearly seven years, almost all of this time being spent in active service.

After 1868 up to the time of his death Dr. Traver practiced his profession in this city. He was a member of numerous organizations, both local and national, among them being the Rhode Island Medical Society, the Providence Medical Association, the American Public Health Association, the Farragut Association, Naval Veterans; the Soldiers' and Sailors' Historical Society, the Military Order of the Loyal Legion of the United States and many others, including several Masonic and other fraternal organizations. He was author of a pamphlet entitled "Battles of Roanoke Island and Elizabeth City."

Dr. Traver married Ellen E. Smith of this city, in 1875. She survives him, as do three daughters.—*The Evening Bulletin, Providence, R. I.*

CHARLES H. PORTER, M. D.

Dr. Charles H. Porter, who graduated from the Albany Medical College with the class of 1861, was afterward Professor of Chemistry in the College, and for many years a prominent physician in Albany, died November 21st, 1903. A biographical sketch will be published in a later issue of the ANNALS.

## Book Reviews

*Organic Nervous Diseases.* By M. ALLEN STARR, M. D., Ph. D., LL. D.  
Lea Bros. & Co., New York and Philadelphia, 1903.

Some of us have waited long for this product of the head and hand of M. Allen Starr, and now all of us must sincerely and gratefully admire what some of us have long expected.

This book is a marvel of workmanship of a most finished type. Clear, orderly, sharp, precise without the quibbling and hesitancy which so often

mar a work of fine distinctions; concise without tantalizing brevity; original and individual without a tone of oddity; authoritative without egoism it is, in fact, only what a work could be coming from such an author: it is the author in book form. There is in the book something that one rarely finds in large scientific medical works, a quality which makes the lectures of the author so refreshing and inspiring to his students, namely, eagerness. It is not an eagerness to pose as an impartor of knowledge, but an eagerness in which self is lost and which exhibits itself in a great, honest, tense desire to be understood for the sake of the knowledge rather than for personal gratification. Those of us who sat under him will never forget the gradually increasing earnestness of the lecture, the poised finger, the sparkling eye, the eager face of the lecturer, and we will never forget what he thus taught us. Personality discussed in the review of his book would be distasteful to the author, but how can we avoid it in speaking of this book since the author has unwittingly but fortunately infused his personality into his work?

The form of the book promptly makes a good impression to begin with. Neatly bound, printed in clear clean type, and illustrated with 275 engravings and twenty-six plates in color, it has an interesting and pleasing appearance. The illustrations are not mere pictures thrown in recklessly to add to the general appearance, but go hand in hand with the text, finding there frequent reference and saving pages and pages of detailed description and tiresome repetition.

The strength of the text lies in its clear and orderly presentation of *thoughts*. The author in his preface says that the extensive literature of neurology has been carefully sifted, its thoughts collated, and its theories considered; but that endeavor has been made to utilize present observation and experience. It is this mode of presentation which gives the rare quality of charm to any big medical book.

The reader finds that the author has saved him the trouble of wading through masses of history and theory, but that the simple thoughts here given can be depended upon though the weight of their backing is felt rather than perceived.

The principles underlying differential diagnosis and the considerations leading to the location of the exact seat of disease run in logical sequence from the beginning to the end of the book. The first half of the book deals with organic diseases of the spinal and peripheral systems, while the latter half is devoted to organic brain diseases. The chapters on neuritis and neuralgia are especially strong—or rather especially original, for all parts are especially strong—and should be read by every general practitioner as well as by the neurologist. One can use the book as few large books on special subjects can be used, namely, for general consecutive reading as well as a book of reference on particular occasion. Whatever subject is read one will find interest and new information garnered from the immense storehouse of knowledge filled with the many years of experience of an honest workman. Dr. Starr is to be congratulated on giving us at last a firm and solid reference book on neurology, one which for years to come, will spend more of its time on the study table than on dusty shelves.

WM. MCD,



*The Surgical Diseases of the Genito-Urinary Organs.* By E. L. KEYES, A. M., M. D., LL. D., Consulting Surgeon to the Bellevue and the Skin and Cancer Hospitals; Surgeon to St. Elizabeth Hospital, formerly Professor of Genito-Urinary Surgery, Syphilology, and Dermatology at the Bellevue Hospital, Medical College, etc.; and E. L. KEYES, Jr., A. B., M. D., Ph. D., Lecturer on Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital; Assistant Visiting Surgeon to St. Vincent's Hospital; Physician to the Venereal Clinic, Out-Patient Department of the House of Relief to the New York Hospital, etc. Third Edition, Thoroughly Revised, Entirely Rewritten and Enlarged. With One Hundred and Seventy-four Illustrations in the Text and Eleven Plates, eight of which are in Colors. Sold only by Subscription. 8vo Cloth, \$5.00. New York: D. Appleton & Co., 1903.

The estimable treatise on the Surgical Diseases of the Genito-Urinary Organs is the legitimate successor of the work of Van Buren and Keyes, on Genito-Urinary Diseases, with Syphilis, published in September, 1867. The book is written from the standpoint of the surgical diseases of the genito-urinary organs, and however unfortunate may seem to be the relegation of syphilis and sexual psychoses to the venereal specialist, the work must be judged from the viewpoint of the author. The tremendous growth of the genito-urinary specialty, in common with specialities of other viscera, may render necessary the sub-division of genito-urinary diseases into smaller groups. The danger is great, however, of "venereal specialism" drifting into the hands of charlatans, and the diseases resulting from sexual contagion were safer in the hands of the general genito-urinary specialist. The consideration of syphilis has been entirely excluded from the work, and the question of gonorrhœa taken up largely because of its relation to diseases of the bladder, the kidney and other portions of the genito-urinary tract. The authors,—wisely it would seem—treat, conservatively, the operation of stripping the kidney capsules as a remedy for chronic Bright's disease, and ureteral catheterization as an efficient aid in diagnosis of the diseases of which the volume treats.

The tendency to recognize the advantage of the French metric system is noted and thoroughly commended.

The book is written from the personal and practical standpoint rather than from the purely theoretical, and contains a vast amount of practical information, of use, not only to the specialist, but to general practitioners in medicine as well.

The authors make no appeal to maudlin sentiment and set forth the modern ideas of the causes and effects of the various departures from normal conditions of the genito-urinary tract with judgment, discretion and common sense. The treatment of varicocele and hydrocele, endorsed by years of practical experience and handed down to us from the fathers, has been retained intact, but the influence of bacteria in the causation of acute and chronic changes in the genito-urinary tract has been recognized, in its full significance, and this section is thoroughly up-to-date. The general treatment of the various surgical diseases is practical, suggestive and inclusive.

The plates are worthy of commendation, and the typography of the book all that can be desired.

J. D. C.

*Electro-Diagnosis: Scheme for the Differential Testing of Nerves and Muscles for Use in Diagnosis.* By J. MONTGOMERY MOSHER, A. M., M. D., Clinical Professor of Insanity, Neurology and Electro-Therapeutics, Albany Medical College; Attending Specialist in Mental Diseases and Physician to the Out-Patient Department for Nervous and Mental Diseases, Albany Hospital. Illustrated. Albany, N. Y.: Brandow Printing Company, Fort Orange Press, 1903.

When one considers the great importance of electro-diagnosis in the differentiation of many varieties of nervous diseases, as well as in determining the extent of the disease, it seems strange that no work devoted to this subject has heretofore been published in the English language. Knowledge regarding the testing of muscles and nerves has been regarded as more or less peculiar to the neurologist and has been diffused but slightly among the profession at large. In this very neat and compact volume the author has presented in a clear and concise fashion the different methods employed in testing muscles and nerves and has, furthermore, devoted considerable attention to the interpretation of the facts thus obtained.

The volume opens with a description of the technique of electro-diagnosis in its application to the examination of muscles and nerves, the instruments and apparatus required being minutely described.

Following this is a chapter on the variations in electric excitability, subdivided into: (a) quantitative variations in electric excitability; (b) qualitative variations in electric excitability, and, (c) quantitative-qualitative variations in electric excitability. This chapter occupies the greater part of the volume and is a model of clearness and accuracy. Special attention is paid to the reaction of degeneration; and the conditions under which it occurs, as well as its significance, are briefly discussed. Other reactions, such as the Myotonic, Myasthenic, Myoclonic and Neurotonic, receive appropriate consideration. Electric Sensibility and Electric Resistance are the subjects of brief, yet comprehensive chapters.

The volume closes with a chapter upon the motor points, and this cannot be praised too highly. Every nerve and muscle motor point is accurately located, the important regional anatomical landmarks being employed in determining their location. Accompanying this chapter are six excellent plates, upon which all of the motor points are graphically pictured. The reviewer has made practical tests of the accuracy of location of these motor points, by simply having an assistant read off their anatomical situation, and in practically every instance the expected contraction would occur at the first contact of the electrode.

As the author states in the preface, the operation of tendon transplantation has aroused the interest of surgeons in the examination of the reaction of individual muscles and nerves, and to everyone who may have occasion to make such examinations this volume will be most welcome. A. W. E.

*Functional Diagnosis of Kidney Disease*, with Especial Reference to Renal Surgery. Clinical Experimental Investigations. By Dr. LEOPOLD CASPER, (Privatdocent an der Universität) and Dr. PAUL FRIEDERICH RICHTER (Assistant der III. Med. Klinik) in Berlin. Translated by Dr. ROBERT C. BRYAN, Adjunct Professor Genito-Urinary Diseases, University Medical College, Richmond, Va., and Dr. HENRY L. SANFORD, Resident Surgeon, Lakeside Hospital, Cleveland. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut st. 1903.

The remarkable advance made recently in kidney diagnosis has made a volume devoted to this subject especially acceptable. No observers are better qualified to express opinions upon this intricate subject than the authors of this work, whose contributions to the periodical literature of kidney diagnosis have been so extensive and valuable. In this volume they have summarized the results of their study and observation in such a clear and forceful fashion that the reader is left with the conviction that in the future more attention must be paid to this branch of medical science than has been the case in the past.

The volume, which contains 233 pages of subject matter, is sub-divided into five chapters. The first chapter deals with the problems of functional diagnosis in general, and kidney diagnosis in particular. In brief the problems as related to the kidney are two-fold: (1), to gain an idea of the total work done by the kidneys and whether this is sufficient; and (2), To determine how much work each kidney does.

In chapter two the authors consider the importance of functional kidney diagnosis in surgery and the methods of examination. This chapter is illustrated by numerous cases from the literature in which serious results have followed surgery of the kidney without a knowledge of their functional ability.

Chapter three is occupied with a consideration of the methods of functional kidney diagnosis, and is sub-divided into two parts. Part one deals with the determination of renal sufficiency in general and the question of the elimination of the nitrogen and the chlorides; the determination of the molecular concentration of the urine, or cryoscopy; the elimination of artificially introduced substances, as methylene blue; the chemical activity of the kidneys; the toxicity of the urine; and the determination of the molecular concentration of the blood. Part two sets forth the determination of the above conditions in each kidney separately.

In chapter four the authors present the results of their investigations, as illustrated by numerous specific cases, all of which go to prove the great value and importance of the newer methods of kidney diagnosis.

The last chapter contains the conclusions which they have drawn from their extended researches. These conclusions may be briefly summarized: First, that kidney insufficiency cannot be determined from the examination of the renal excretion alone; second, that from the product of the kidney (the urine) can be estimated the amount of work performed by each kidney only with the aid of ureter catheterization. They regard the determination of the molecular concentration of the secretion of each kidney and the phloridzin test as by far the most valuable tests of renal function.

The translators are to be complimented upon the excellent English into which they have rendered the original German, a statement which cannot be made of many books translated into the English language. A. W. E.



# INDEX TO VOLUME XXIV

	PAGE
Acid Auto-Intoxications apart from Diabetes Mellitus. By James F. Rooney, M. D.....	449
Address of Welcome. By Henry Hun, M. D.....	326
Albany College of Pharmacy, Commencement Exercises.....	295
Albany College of Pharmacy Opens.....	611
Albany College of Pharmacy, Opening Session.....	504
Albany College of Pharmacy, The.....	462
Albany Department of Health, Vital Statistics.....	36, 107, 171, 229, 283, 357, 405, 459, 499, 556, 604, 659
Albany Free Dispensary Association, The.....	367
Albany Fresh Air Guild.....	115
Albany Guild for the Care of the Sick Poor, The.....	44, 114, 181, 237, 283, 295, 367, 409, 462, 505, 559, 611, 667
Albany Guild for the Care of the Sick Poor, Special Obstretrical Department, The .....	456, 495
Albany Hospital Officers.....	181
Albany Hospital, Pavilion F, Department for Mental Diseases, First Report, for the Year Ending February 28, 1903. By J. M. Mosher, M. D.....	211
Albany Hospital, Report of the Pathologist on the Work Done from March 1, 1902, to March 1, 1903. By George Blumer, M. D..	217
Albany Hospital Training School.....	667
Albany Hospital for Incurables.....	667
Albany Medical College, Alumni Association of the.....	295, 503
Albany Medical College Alumni Association of the City of New York.	180
Albany Medical College, A New Fraternity at the.....	237
Albany Medical College Announcement for 1903-'04.....	461
ALBANY MEDICAL COLLEGE, ASSOCIATION OF THE ALUMNI OF THE, THIRTIETH ANNUAL MEETING.	
Address of Welcome. By Henry Hun, M. D.....	326
Report of Executive Committee and Recording Secretary.....	329
Treasurer's Report. By Robert Babcock, M. D.....	330
President's Address. By Walter W. Scofield, M. D.....	330
Report of the Historian. By Eugene E. Hinman, M. D.....	334
Reminiscences of the Class of 1843. By John Campbell, M. D....	335
Report of the Class of 1853. By Eugene E. Hinman, M. D.....	337
Report of the Class of 1863. By Alfred B. Huested, M. D.....	340
Report of the Class of 1873. By H. B. Whitehorne, M. D.....	343
Report of the Class of 1883. By William S. Donnelly, M. D.....	344
Report of the Class of 1893. By C. W. Hamm, M. D.....	347
Election of Officers.....	350
Commencement Exercises and Alumni Dinner.....	351
Albany Medical College, Central New York Alumni Association of the,	611
Albany Medical College; New England Alumni Association.....	667
Albany Medical College, Opening Session.....	504
Albany Medical College, Seventy-third Session.....	554



Albinism, A Note on, with Especial Reference to its Racial Characteristics among Melanesians and Polynesians.....	122
Allison, H. E., M. D. Insanity in Penal Institutions and its Relation to Principles of Penology.....	641
Alumni Day, 1903.....	223
Alumni Association Proceedings for 1903.....	461
American Congress on Tuberculosis, The.....	240, 506, 613
American Electro-Therapeutic Association.....	182, 505
American Medical Editors' Association.....	297
American Medico-Psychological Association.....	182, 668
American Public Health Association.....	669
American Urological Association.....	297
Anæmia .....	574
Anæmia in Children.....	574
Anatomists, Annual Meeting of.....	115
Anomalies of the Reflexes, The.....	513
Antitetanic Properties of the Nerve Centers of the Immunized Animal, Researches on the .....	631
Aneurisms, Aortic, The Treatment of, with Subcutaneous Injections of Gelatine .....	243
Aortic Regurgitation and Stenosis and Mitral Regurgitation with Capillary Pulse, Report of a Case of. By Willard H. Sweet, M. D. ....	18
Aphasia, Hereditary, a Family Disease of the Central Nervous System, Due Possibly to Congenital Syphilis.....	626
Apparatus, Extension, Improvements in. By George E. Gorham, M. D. ....	392
Archibold, John, M. D. Vice-President's Address.....	635
Arsenical Idiosyncrasy .....	633
Arterio-Sclerosis .....	169
Arterio-Sclerosis and the Digestive System. By Charles G. Stockton, M. D. ....	140
Arterio-Sclerosis, The Early Diagnosis and Symptoms of. By DeLancey Rochester, M. D.....	127
Arterio-Sclerosis and the Heart. By Glentworth R. Butler, M. D....	133
Arterio-Sclerosis and the Kidney. By Irving Phillips Lyon, M. D....	137
Arterio-Sclerosis and Mental Disease. By Adolf Meyer, M. D.....	151
Arterio-Sclerosis of the Nervous System. By William Browning, M. D. ....	145
Atropin, The Intestinal Action of.....	185
Babcock, Robert, M. D. Treasurer's Report.....	330
Bacilli, The Acid-Resisting.....	629
Bacillus Subtilis, A Contribution to the Question of the Pathogenesis of the, Especially for the Eye.....	422
Barber Shops, Inspection of.....	410
Baths, Shower, in Schools.....	409
Bellevue Hospital, Improvements at.....	505
Bender Hygienic Laboratory, Changes at the.....	462
Blood, The Identification of Human.....	281
Blumer, George, M. D. Albany Hospital. Report of the Pathologist on the Work done from March 1, 1902, to March 1, 1903.....	217

Blumer, George, M. D. A Note on the Embryonal Glandular Tumors of the Kidney.....	444
Blumer, George, M. D. Some Aspects of the Pathology and Bacteriology of Typhoid Fever from the Standpoint of Recent Investigations .....	29
Blumer, G. Alder, M. D. President's Address.....	375
BOOK REVIEWS.	
<i>American Journal of Orthopedic Surgery, The</i> .....	567
Clinics, Biographic. By George M. Gould, M. D.....	118
Diseases of the Skin. By H. Radcliff Crocker, M. D.....	241
Electro-Diagnosis; Scheme for the Differential Testing of Nerves and Muscles. By J. Montgomery Mosher, M. D.....	675
Eye, Diseases of the, Manual of the. By Charles H. May, M. D..	615
Genito-Urinary Organs, The Surgical Diseases of the. By E. L. Keyes, M. D., and E. L. Keyes, Jr., M. D.....	674
Gynecology. A Text-Book for Students and Practitioners. By William H. Pryor, M. D.....	566
Handbook of Materia Medica, Pharmacy and Therapeutics. By Samuel O. L. Potter, M. D.....	412
Head, The Surgery of the. By Bayard Holmes, M. D.....	565
Infancy and Childhood, The Diseases of, for the Use of Students and Practitioners of Medicine. By L. Emmett Holt, M. D....	298
International Clinics .....	465, 507, 617
Kidney Disease, Functional Diagnosis of. By Leopold Casper, M. D., and Paul F. Richter, M. D.....	676
Manton's Obstetrics. By W. P. Manton, M. D.....	567
Materia Medica and Therapeutics, A Practical Treatise on. By Robert Bartholow, M. D.....	563
Medical Society of the State of New York, 1902, Transactions of the .....	48
Medical Society of the State of New York, Transactions of the, for the Year 1903.....	616
Metabolism and Nutrition, Clinical Treatises on the Pathology and Therapy of Disorders of. By Prof. Dr. Carl von Noorden....	464
Morphinism, The Mattison Method in. By J. B. Mattison, M. D.	47
Nursing, A Text-Book of. By Clara Weeks-Shaw.....	117
Obstetrics. A Text-Book for the Use of Students and Practitioners. By J. Whitridge Williams, M. D.....	413
Organic Nervous Diseases. By M. Allen Starr, M. D.....	672
Physicians' Visiting List (Lindsay & Blakiston's) for 1903, The..	50
Psychopathological Researches. By Boris Sidis, M. A., Ph. D....	48
Physiologic Therapeutics, A System of. Edited by Solomon Solis Cohen, A. M., M. D.....	47, 616
Regional Minor Surgery. By George Grey Van Schaack, M. D..	240
Surgery, A Text-Book of. By George Emerson Brewer, A. M., M. D. ....	508
The International Medical Annual.....	415
The Medical and Surgical Uses of Electricity. By A. D. Rockwell, M. D.....	414
Work Book in Surgery. By Luzerne Coville, M. D.....	300
Boone, H. W., M. D. Postural Treatment in Cases of Hypertrophy of the Prostate with Residual Urine.....	395
Boston Medical and Surgical Journal, Anniversary of the.....	238
Botryomycosis .....	306
Bronchus, A Case of Foreign Body in the.....	571
Browning, William, M. D. Arterio-Sclerosis of the Nervous System.	145
Butler, Glentworth R., M. D. Arterio-Sclerosis and the Heart.....	133
Cairo, A New Anglo-American Hospital in.....	298

Calomel, The Use of, in Pediatrics.....	186
Campbell, John, M. D. Reminiscences of the Class of 1843.....	335
Canadian Medical Association, The.....	669
Cancer, Salt as a Factor in.....	670
Carcinoma of the Intestine, Observations Regarding the Surgical Treatment of .....	416
Carcinoma Recurrence .....	417
Charities and Correction, Conference of.....	612
Charities and Corrections, Fourth State Conference of.....	506
Chloroma, Concerning, and its Relation to Leukaemia.....	624
Civil Service Examinations, State and County.....	238, 506, 560, 668
Class of 1843, Reminiscences of the. By John Campbell, M. D.....	335
Class of 1853, Report of the. By Eugene E. Hinman, M. D.....	337
Class of 1863, Report of the. By Alfred B. Husted, M. D.....	340
Class of 1873, Report of the. By H. B. Whitehorne, M. D.....	343
Class of 1883, Report of the. By William S. Donnelly, M. D.....	344
Class of 1893, Report of the. By C. W. Hamm, M. D.....	347
Class of 1903, A. M. C., Honor List for.....	44
Clinical Courses, Practical.....	504
College of Physicians and Surgeons, Reorganization of.....	410
Congress of American Physicians and Surgeons.....	239, 368
Commission in Lunacy, Report of the.....	115
Consumptives, Sanatoria for.....	368
Consumption, Silver Nitrate Injections in the Treatment of.....	369
Contagious Disease Hospital.....	367
Contagious Disease on Railway Trains.....	298
Cornea, Anterior Surface and Curvature of the, A Simple Method of Examination of the.....	570
Corneal Ulcers. Clinical and Bacteriological Investigations Concern- ing Marginal .....	571
Courses for Physicians, Special.....	239
Craig, Joseph D., M. D. Some Sequelae of Smallpox.....	486
Cranial Button, Reimplantation of the, after Trephining in the Dog and the Rabbit, An Experimental Study on.....	310
Crothers, T. D., M. D. Toxaemias from Spirit Drinking.....	13
Curtis, F. C., M. D. Prevention of Smallpox.....	480
Davis, Charles Edmond, M. D. Dr. Lorenz's Clinic in New York..	65
Davis, Charles Edmond, M. D. Hip-Joint Deformities.....	268
Dawes, Spencer L., M. D. Varicella, with a Report of an Unusual Epidemic .....	532
Dental Society of the State of New York, Annual Meeting of.....	368
Dentistry in Medical Colleges.....	560
Diabetes Mellitus, Infantile. By Howard E. Lomax, M. D.....	71
Diabetes, The Treatment of.....	120
Diphtheria Bacilli in the Alimentary Tract and the Factors Involved, The Fate of.....	59
Diphtheria Bacillus, Recent Studies regarding the Morphology of the. By Arthur T. Laird, M. D.....	251
Diphtheria, The Release of Quarantine in. By Thomas W. Salmon, M. D. ....	648

Donnelly, William S., M. D. Report of the Class of 1883.....	344
Drug Habits in the United States.....	116
Dysentery due to Double Infection with the Uncinaria Duodenalis and the Amoeba Coli, A Case of. By Samuel B. Ward, M. D..	23
Dyspepsia, Nervous .....	574
Extostoses, Multiple Hereditary.....	250, 309
Ether, Elimination of, by the Lungs, Researches on the.....	242
Ergot in Chorea.....	572
Epidemics of Contagious and Infectious Diseases, The Management of. By J. S. Fulton, M. D.....	575
Enuresis .....	574
Enuresis, The Treatment of.....	187
England, Public Health in.....	239
Endowment Fund, The Need of an.....	456
Endocarditis, Acute Ulcerative. By Samuel B. Ward, M. D.....	515
Eno Sander Prize, The.....	668
Elting, Arthur W., M. D. The Unusual Symptoms of the Weakened Foot .....	189
Electro-Diagnosis, A New Work on.....	46
Eclampsia, Puerperal, The Prevention of. By John T. Wheeler, M. D.	313
Eczema in Infants.....	121
Faith Healer Convicted.....	613
Foods, Adulterants and Preservatives in.....	45
Food and Drug Legislation, Pure.....	368
Foot and Mouth Disease.....	45
Foot, Weakened, The Unusual Symptoms of the. By Arthur W. Elting, M. D.....	189
Ford, Willis E., M. D. The Education of the Nurse.....	586
Fulton, J. S., M. D. The Management of Epidemics of Contagious and Infectious Diseases.....	575
Gastric Ulcer, The Treatment of, by Olive Oil.....	118
Glycogen in the Blood, the Hæmatopoietic Glands, Exudates, and Infectious Foci .....	309
Gorham, George E., M. D. Improvements in Extension Apparatus..	392
Gout, Chronic .....	634
Griffin, John M., M. D. A Case of Acute Nephritis Complicated by Lobar Pneumonia in an Infant Seventeen Months of Age.....	396
Gunshot Wounds, A Late Laparotomy for, of the Intestines; Eleven Perforations; Recovery. Dr. James H. Mitchell, M. D.....	218
Hip, Congenital Dislocation of the, The Final Results of the Blood- less Treatment of.....	311
Hip-Joint Deformities. By Charles Edmond Davis, M. D.....	268
Hall, John, M. D. Ocean Traveling as a Therapeutic Measure.....	206
Hamm, C. W., M. D. Report of the Class of 1893.....	347
Haner, George, M. D. Hygiene in the Prevention and Cure of Dis- ease .....	469
Happel, William H., M. D. Report of a Series of Cases from the Maternity Department of the Albany Hospital.....	423
Havana, The Health of the City of.....	38



Health Officials, Conference of.....	410
Hinman, Eugene E., M. D. Report of the Historian.....	334
Hinman, Eugene E., M. D. Report of the Class of 1853.....	337
Holding, Arthur F., M. D. Therapeutic Effects of Roentgen Rays on Malignant Growth; Report of Cases.....	94
Heart, Tuberculosis and Disease of the, from the Therapeutic Point of View .....	52
Heart Disease, Valvular, and Pulmonary Tuberculosis, Concerning the Coincidence of.....	52
Hemiplegic Contractures, The Theory of.....	55
Hemorrhages, Fatal, from the Stomach, A Contribution to the Sub- ject of .....	420
Homeopathic Medical Society of the State of New York, The.....	182
Hospital for Contagious Diseases, New.....	462
Hospital for Incurables.....	463
Husted, Alfred B., M. D. Report of the Class of 1863.....	340
Hun, Henry, M. D. Address of Welcome.....	326
Hydrocephalus, Chronic, with Report of a Case Associated with Gigantism. By George G. Lempe, M. D.....	260
Hygiene in the Prevention and Cure of Disease. By George Haner, M. D. ....	469
Hyperchlorhydria, A Symposium.....	369
Index Medicus, A New.....	116
Index Medicus, The.....	411

## IN MEMORIAM.

Allen, W. E., M. D.....	562
Barney, Reuben, M. D.....	498, 563
Barton, Thomas J., M. D.....	615
Bender, Matthew W.....	404
Betts, William Winthrop, M. D.....	458, 497
Charrette, Louis, M. D.....	105
Holcomb, Jerome B., M. D.....	171
Johnson, Stephen C., M. D.....	170
Harris, Newton C., M. D.....	614
Howard, Daniel B.....	615
Kenyon, John D., M. D.....	563
Martindale, F. E., M. D.....	171
Porter, Charles H., M. D.....	672
Race, Gorton H., M. D.....	498
Scollard, James I., M. D.....	171
Thomas, Gilbert W., M. D.....	36
Thompson, Allen R., M. D.....	499
Timmers, James H., M. D.....	35
Traver, Lorenzo, M. D.....	672
Van Aken, David Fletcher, M. D.....	170
Van Vranken, Adam T., M. D.....	106
International Congress of Hygiene at Brussels.....	297
International Congress of Medicine.....	240
International Housing Congress.....	463
International Medical Congress.....	411
Intoxications, Alimentary, Produced by Fish .....	54
Intra-abdominal Organs, Twisting of the Pedicle of, The Causes of the .....	183

Insanity in Penal Institutions and its Relation to Principles of Penology. By H. E. Allison, M. D.....	641
Insanity, Post-Operative .....	301
Katatonía .....	302
Kellogg, W. Clinton, M. D. Presidential Address.....	1
Kidney, Experimental Lesions of the.....	126
Kinescopy, a New Method of Testing the Refraction of the Eye.....	61
Kidney, Embryonal Glandular Tumors of the, A Note on the. By George Blumer, M. D.....	444
Koch's Theory, The Last Blow to.....	232
Korsakoff's Psychosis of Gastro-Intestinal Origin, A Case of.....	303
Laird, Arthur T., M. D. Recent Studies Regarding the Morphology of the Diphtheria Bacillus.....	251
Lempe, George G., M. D. Chronic Hydrocephalus with Report of a Case Associated with Gigantism.....	260
Liver Abscesses, Bacterial Findings in.....	631
Lomax, Howard E., M. D. Infantile Diabetes Mellitus.....	71
Lorenz's Clinic in New York. By Charles Edmond Davis, M. D.....	65
Lung, Surgical Treatment of Diseases of the.....	305
Lupus, The Light Treatment of.....	123
Lyon, Irving Phillips, M. D. Arterio-Sclerosis and the Kidney.....	137
Mallery, Charles B., M. D. Report of a Case of Tetanus Treated with Anti-Tetanic Serum.....	319
Manila, P. I., Memoranda from the Report of the City of, for the Month of May, 1902.....	38
Maternity Department of the Albany Hospital, Report of a Series of Cases from the. By William H. Happel, M. D.....	423
Medical Association of Troy and Vicinity.....	43
Medical Bills, Important, in the New York Legislature.....	103
Medical Congress, Fourth Pan-American.....	368
Medical Corps of the Navy.....	297
Medical Directory, The 1903 Standard.....	238
Medical Journal, A Change in a.....	506
Medical Journals, Consolidation of.....	463
Medical Society of the County of Albany.....	39, 109, 177, 234, 287, 290, 360, 607, 663
Medical Society of the State of New York.....	612
Medical Society of the State of New York, Annual Meeting of the..	114
Medical Society of the State of New York on Medical Legislation and the Standard of Medicine, Influence of the. By Albert Vander Veer, M. D. ....	6
Medicine, Popular Errors Regarding. By F. W. St. John, M. D.....	493
Mental States and the Circulation and Respiration, On the Relation Between .....	627
Meralgia, Roth-Bernhardt, and its Operative Treatment, Contribution to the Subject of the.....	308
Meyer, Adolf, M. D. Arterio-Sclerosis and Mental Disease.....	151
Microbes at the Pole.....	298
Milk Supply and Infant Feeding, The.....	233

Mitchell, James H., M. D. A Late Laparotomy for Gunshot Wounds of the Intestines; Eleven Perforations; Recovery.....	218
Moriarta, Douglas C., M. D. Report of a Case of Tetanus.....	598
Moriarta, Douglas C., M. D. The Report of a Case of Enlarged Prostate .....	275
Mosher, J. M., M. D. Albany Hospital, First Report of Pavilion F, Department for Mental Diseases, for the Year Ending February 28, 1903 .....	211
Motor Locomotion, Injurious Effects of Rapid.....	669
Myelitis, So-called Acute, The Pathology of.....	370
Myeloma, Multiple, of the Bones, with Albumosuria.....	620
Myopia, High, The Operative Treatment of, by Means of Primary Linear Extraction of the Clear Lens, and its Results.....	63
Myopia, The Treatment of.....	421
Nasal Accessory Sinuses, A Contribution to the Study of the Malignant Tumors of the.....	246
Ne Pereat Populus Scientia Absente.....	102
Nephritis, Acute, Complicated by Lobar Pneumonia in an Infant Seventeen Months of Age, A Case of. By John M. Griffin, M. D. ....	396
Nervous System, Central, in the Neuritic Disorders of Chronic Alcoholism, On Changes in the.....	511
Nervous System of Men and Animals, Histological Changes in the, Resulting from Lightning Stroke, or the Action of Powerful Electric Currents .....	124
Neurasthenia, Gastric .....	574
New York State Medical Association.....	612
Nil Nisi Bonum.....	224
Nurse, The Education of the. By Willis E. Ford, M. D.....	586
Nurse, The Trained, and the Armstrong Law.....	561
Nurses' Alumni Association.....	296
Nurses' Association of Northern New York.....	296
Nurses, Graduating Exercises, Training School for.....	367
Œdema, Acute Circumscribed.....	622
Œdema, Persistent Hereditary, of the Lower Limbs.....	119
Œsophagus, Structure of the, Surgical Intervention in.....	618
Opium, On the Use of, in the Carditis of Children.....	573
Optic Atrophy, Traumatic.....	64
Osteomyelitis and Tuberculosis, Extirpation and Regeneration of the Long Bones in.....	312
Osteopathy in New Mexico.....	463
Otitis Externa, Concerning the Pathology and Treatment of.....	373
Pan-American Sanitary Congress.....	46
Paralysis, Spastic and Syphilitic Spinal.....	57
Percussion, An Improved Method of.....	464
Peritonitis, Tuberculous, The Medical Treatment of.....	188
PERSONAL.	
Adey, John, M. D.....	117
Alexander, William A., M. D.....	412
Allen, William E., M. D.....	561

Baltes, E. W., M. D.....	183
Barton, Thomas Jefferson, M. D.....	614
Bassett, Jared, M. D.....	298
Battin, Harry E., M. D.....	614
Bigarel, Frank D., M. D.....	614
Branch, F. D., M. D.....	116
Cavanaugh, W. J., M. D.....	46
Clute, Russell, M. D.....	671
Congdon, John B., M. D.....	561
Conklin, Charles R., M. D.....	369, 614
Coopernail, George P., M. D.....	183
Cotter, P. G., M. D.....	116
Cox, Hugh M., M. D.....	561, 614
Cunningham, Thomas H., M. D.....	412, 614
Deveny, T. E., M. D.....	506
Dingman, J. H., M. D.....	46
Dwyer, Martin J., M. D.....	183
Fitzgerald, J. F., M. D.....	116
Flynn, J. H., M. D.....	46
Fox, W. H., M. D.....	506
Gardner, George F., M. D.....	369, 506
Gartner, Charles, M. D.....	614
Gates, Aden C., M. D.....	369
Gormly, Harry, M. D.....	412
Grant, R. A., M. D.....	506
Gregory, M. S., M. D.....	506
Gutman, John H., M. D.....	412, 671
Ham, Stillman, M. D.....	412
Harris, Ira, M. D.....	412
Harris, Newton C., M. D.....	561
Haskell, Clayton, M. D.....	412
Heffernan, John F., M. D.....	183
Herrick, C. B., M. D.....	240
Hollis, Leroy, M. D.....	369
Howard, Daniel B., M. D.....	561
Jackson, Earl, M. D.....	411
Johnson, I. G., M. D.....	240
Kenyon, John D., M. D.....	561
LaMoure, Howard A., M. D.....	298, 506
Livingston, B., M. D.....	369
Murray, William H., M. D.....	370, 412
Mandelbaum, M. Joseph, M. D.....	183, 506, 561
Mark, Joseph, M. D.....	561
Mason, E. A., M. D.....	506
McAllister, John, M. D.....	369
McCarthy, Daniel A., M. D.....	183
McCarthy, Thomas, M. D.....	117
Mereness, Harry E., M. D.....	614
Merriman, George C., M. D.....	614
Moak, Harris, M. D.....	46
Moscrip, R. S., M. D.....	506
Neuman, Leo, M. D.....	370
Newton, James R., M. D.....	671
Osterhout, John J., M. D.....	412
Packer, F., M. D.....	506
Pratt, H. Z., M. D.....	412
Racette, J. W., M. D.....	369
Richardson, C. Harper, M. D.....	370
Robinson, W. F., M. D.....	116
Rooney, James F., M. D.....	412
Root, Arthur, M. D.....	370
Salmon, T. W., M. D.....	117, 671



Sautter, Arthur, M. D.....	370
Sebring, W. C., M. D.....	369
Smart, F. A., M. D.....	117, 671
Stanwix, George B., M. D.....	240
Streeter, George L., M. D.....	671
Swart, W. J., M. D.....	370
Theisen, C. F., M. D.....	370
Traver, Alvah H., M. D.....	183, 370
Van Derzee, Douw H., M. D.....	412
Van Loon, Arthur, M. D.....	370
Weaver, Fred B., M. D.....	183
Wilcox, E. W., M. D.....	117
Pharynx and Oesophagus, The Extraction of Swallowed Foreign Bodies from the.....	248
Photographs and Information Wanted.....	181
Photo-Therapy and Radiography at the Philadelphia Polyclinic, Department of .....	297
Phthisis .....	574
Plague Congress, A.....	669
Plague in Mexico.....	183
Pneumonia Epidemic .....	411
Pneumonia, The Treatment of.....	632
Pollution of Waterways.....	410
Porencephaly, Concerning .....	625
Presidential Address. By W. Clinton Kellogg, M. D.....	1
President's Address. By G. Alder Blumer, M. D.....	375
President's Address. By Walter W. Scofield, M. D.....	330
Prize, Samuel D. Gross.....	237
Progress, One Kind of.....	355
Prostate, Cases of Hypertrophy of the, with Residual Urine, Postural Treatment in. By H. W. Boone, M. D.....	395
Prostate, Enlarged, The Report of a Case of. By Douglas C. Moriarta, M. D.....	275
Prurigo Lymphatica, Concerning.....	372
Pseudo-Tubercle Bacilli, The.....	60
Pulsus Infrequens. By Thomas E. Satterthwaite, M. D.....	157
Pyramidon .....	634
Quadriceps Femoris, The Operative Reparation of the Paralyzed....	514
Quien Mucho Abraza Poco Aprieta.....	401
Qui S' Excuse S' Accuse.....	399
Rabies Discussed before Yale Medical Alumni.....	296
Reception at Dr. Ward's Home.....	44
Reflex, The Corneo-Mandibular.....	56
Reflexes; Their Relation to Diagnosis in Rheumatoid Arthritis.....	420
Retrospect and a Prophecy, A.....	27
Richardson, Dr. A. B., Death of.....	463
Rochester, DeLancey, M. D. The Early Diagnosis and Symptoms of Arterio-Sclerosis .....	127
Roentgen Rays on Malignant Growth; Report of Cases, Therapeutic Effects of. By Arthur F. Holding, M. D.....	94
Rooney, James F., M. D. Acid Auto-Intoxications Apart from Dia- betes Mellitus .....	449

St. John, F. W., M. D. Popular Errors Regarding Medicine.....	493
St. Peter's Hospital, Improvements at.....	296, 612
St. Peter's Hospital Training School, First Graduates of.....	409
Salmon, Thomas W., M. D. The Release of Quarantine in Diph- theria .....	648
Sanitary Officers, Conference of.....	45
Sanitary Officers of the State of New York, Third Annual Con- ference of .....	559
Satterthwaite, Thomas E., M. D. Pulsus Infrequens.....	157
Scarlet Fever, The Treatment of, with Streptococcus Serum.....	187
Scarlet Fever, The Class Coccus.....	239
Scofield, Walter W., M. D. President's Address.....	330
Septicaemia Treated with Formalin.....	116
Smallpox .....	407
Smallpox in Minneapolis.....	38
Smallpox, Prevention of. By F. C. Curtis, M. D.....	480
Smallpox, Some Sequelae of. By Joseph D. Craig, M. D.....	486
Spinal Cord, A Case of Abscess of the, Associated with Retro-Bulbar Neuritis .....	245
Spinal Cord, The Condition of the, in Pulmonary Tuberculosis during Mental Disease .....	302
Spinal Cord, A Case of Tumor of the, Treated by Operation.....	184
Stenoses, The Treatment of Multiple Tuberculous, of the Small Intestine .....	510
State Boards, Reciprocity between.....	239
State Antitoxin Laboratory, The.....	226
State Board of Charities, Changes in.....	410
State Examinations, January.....	238
State of New York—State Commission in Lunacy. Recent Progress in Matters Pertaining to the Care of the Insane in the State of New York.....	399
State Nurses' Association.....	297
Stockton, Charles G., M. D. Arterio-Sclerosis and the Digestive System .....	140
Stomach, Malignant and Non-Malignant Diseases of the, The Sur- gical Treatment of. By Albert Vander Veer, M. D.....	544
Stomach, Operations upon the, with Special Reference to the Toilet of the Peritoneum. By Albert Vander Veer, M. D.....	594
Stomach, Surgery of the, with Report of Cases. By Albert Vander Veer, M. D.....	85
Summer Resorts, To Inspect.....	612
Surgeon General's Report.....	668
Surgery in Lunatic Asylums.....	304
Sweet, Willard H., M. D. Report of a Case of Aortic Regurgita- tion and Stenosis and Mitral Regurgitation with Capillary Pulse. 18	
Tabes Dorsalis, Certain Anomalous Forms of.....	58
Tendons, Silk, Further Experiences with.....	249
Tetanus, Report of a Case of. By Douglas C. Moriarta, M. D.....	598
Tetanus, The Prevention of.....	613
Tetanus, The Toy Pistol and.....	463

Tetanus Treated with Anti-Tetanic Serum, Report of a Case of. By Charles B. Mallery, M. D.....	319
Theisen, Clement F., M. D. A Case of Lipoma of the Tonsil.....	437
Therapeutic Measure, Ocean Traveling as a. By John Hall, M. D....	206
Therapeutics, Physiologic, A System of.....	467
Tonsil, Lipoma of the, A Case of. By Clement F. Theisen, M. D....	437
Tonsils, A Contribution to the Pathological Anatomy of the.....	247
Toxaemias from Spirit Drinking. By T. D. Crothers, M. D.....	13
Treasurer's Report. By Robert Babcock, M. D.....	330
Tubercle Bacilli, Experimental Observations on the Action of Dead....	125
Tuberculosis, American Congress of.....	613
Tuberculosis Congress .....	46
Tuberculosis in New York.....	240
Tuberculosis of the Testicle, Castration in.....	509
Tuberculosis, Pulmonary, Concerning the Diazo Reaction, Especially its Occurrence in.....	51
Tuberculous Infection through the Alimentary Canal, Concerning..	53
Typhoid Bacilli and Ice.....	603
Typhoid Bacillus. Germicidal Action of Alum on the.....	671
Typhoid Fever and Its Cure.....	561
Typhoid Fever, Concerning the Epidemiology of.....	630
Typhoid Fever from the Standpoint of Recent Investigations, Some Aspects of the Pathology and Bacteriology of. By George Blumer, M. D.....	29
Typhoid Fever, Saline Infusion in.....	658
Union Alumni Smoker.....	115
Union College, Board of Governors' Semi-Annual Meeting.....	182
Union College Alumni Association of New York City.....	44
Union College Commencement.....	408
Union College, Electrical Engineering at.....	45
Union Concert, Annual.....	237
Union University, General Commencement Day for.....	409
United States Army Medical Corps.....	116
Urea, Pure, in the Treatment of Chronic Pulmonary Tuberculosis; with a Note on the Action of Urea.....	568
Vaccination, A Victory for.....	239
Vaccination, City Ordinance as to.....	176
Vaccination Creed .....	174
Vaccine of Haffkine, Experimental Researches Upon the Immunity Conferred by the.....	373
Vander Veer, Albert, M. D. Influence of the Medical Society of the State of New York on Medical Legislation and the Standard of Medicine .....	6
Vander Veer, Albert, M. D. Operations upon the Stomach, with Special Reference to the Toilet of the Peritoneum.....	594
Vander Veer, Albert, M. D. Surgery of the Stomach, with Report of Cases .....	85
Vander Veer, Albert, M. D. The Surgical Treatment of Malignant and Non-Malignant Diseases of the Stomach.....	544

Vander Veer, Albert, M. D. What is the Limit of Safety where More than One Operation is Indicated?.....	654
Varicella, with a Report of an Unusual Epidemic. By Spencer L. Dawes, M. D.....	532
Venereal Diseases, Prophylaxis of.....	296
Vice-President's Address. By John Archibold, M. D.....	635
Vision, Dimness of, in Diseases of the Kidney Characterized by Albuminuria .....	418
Visual System in an Adult, A Case of Complete Absence of the.....	244
Ward, Samuel B., M. D. A Case of Dysentery due to Double Infection with the Uncinaria Duodenalis and the Amœba Coli.....	23
Ward, Samuel B., M. D. Acute Ulcerative Endocarditis.....	515
Warren Triennial Prize.....	668
Western Ophthalmologic and Oto-Laryngologic Association.....	182
What is the Limit of Safety where More than One Operation is Indicated? By Albert Vander Veer, M. D.....	654
Wheeler, John T., M. D. The Prevention of Puerperal Eclampsia..	313
Whitehorne, H. B., M. D. Report of the Class of 1873.....	343
Yellow Fever Epidemic in Texas.....	670



## ILLUSTRATIONS

	PAGE
The Most Important Types of Diphtheria Bacilli.....	facing page 252
Improvements in Extension Apparatus.....	facing page 392
Lipoma of the Tonsil.....	facing page 437
Adeno-Sarcoma of the Kidney.....	facing page 445
Thermographs of Acute Ulcerative Endocarditis....	facing pages 516, 522
The Surgical Treatment of Diseases of the Stomach.....	pages 546, 550













